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MACFORMAT

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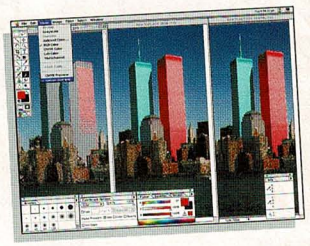

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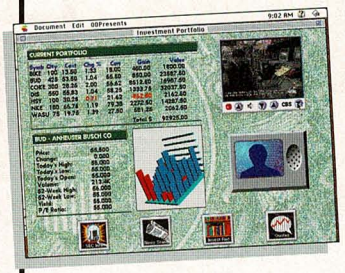

Stop press! The successor to the Mac unveiled, how you'll be able to rent-a-PowerMac, the update on OpenDoc, Macs in schools and all the latest Mac related news.

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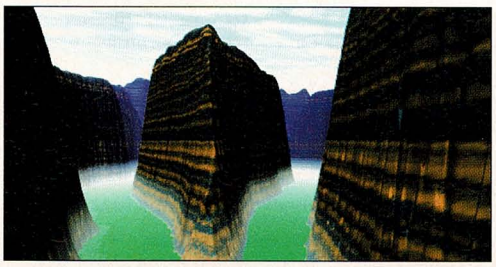

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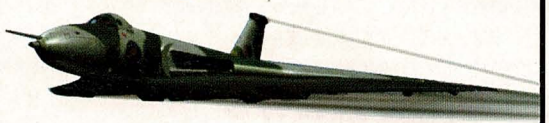

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YOUR COVER DISKS

MACFORMAT comes with a choice of CD-ROM or high-density HD Disk every issue:

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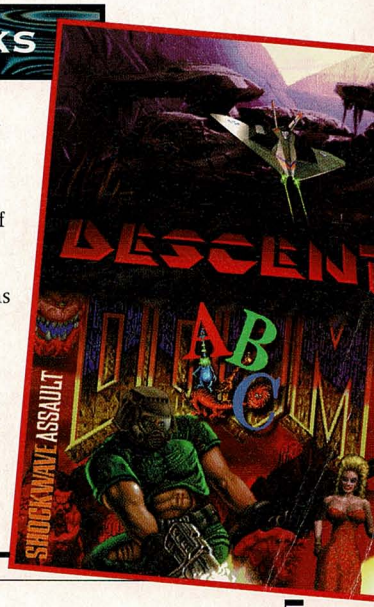
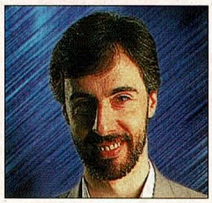
Your Cover Disk 12
2.5Mb of software, including *Eclipse 3*, a screen saver with a difference, compulsive gaming with *Altair 2*, *Gravity Balls* and *Mac Video Poker*, text viewing software, *Text-Browser*, and plenty of handy utilities.



Welcome to MACFORMAT

Everything you wanted to know about MACFORMAT, plus a revealing insight into our New Year's resolutions...

ABOUT OUR WRITERS



ALEX SUMMERSBY

Our Editor learned about Macs by using them and reading up on them, and *not* by trying to coax an ageing IIsi to do more than it was ever meant to do. Now he's got a Quadra 700, his resolution is never to complain about it again.

RICHARD HILL

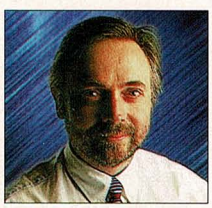
Our News Editor and multimedia guru has been trawling the Internet and working night and day, digging out the news you'll be reading next year, so his New Year's resolution for his Mac is to spend less time with it and more on his life.

COLIN DALZIEL

Our Disk Ed has a degree in Electronic Imaging and Media Communications, is an expert with *Director*, has worked in TV production, and has great plans for the Cover Disk next year. Sadly, his one *real* resolution is to see Chelsea win.

LINDSAY BRUCE

Our new Technical Writer has been tinkering with every bit of Mac kit he can lay his hands on. His resolution is to find those little screws again, find out exactly what Open Transport is supposed to *do*... and find somewhere to live.

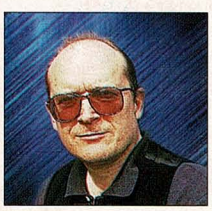


ROD LAWTON

Rod has been setting aside *HyperCard* and getting stuck into *AppleScript*. He aims to learn as much about the latter as he knows about the former, so he can automate everything he has to do and then spend more time with his family.

MARCUS DYSON

Our graphics expert used to be an Art Editor at Future Publishing, but is now Multimedia Manager at a leading software house. We tried to ask him what his resolution was, but he'd already left for a snow-boarding holiday. Another one.



BRIAN LARKMAN

Brian teaches computer graphics, but normally using just one program at a time. His New Year resolution is to persuade the Editor not to force him to explain how to do something in every graphics program under the sun, all at once.

ABOUT MACFORMAT

Welcome again to MACFORMAT, Britain's best-selling Macintosh magazine! Every issue we bring you:

- Tips, techniques and tutorials covering the range of Mac applications, from graphics, spreadsheets and databases to music, multimedia and games.
- Features about exciting Mac developments and novel uses, accompanied by Cover Disk programs whenever possible, so you can discover what your machine can do and try things you mightn't have tried before.
- All the latest Mac-related news, plus all you want to know about the wider issues, the people behind the headlines and the stories behind the stories.
- Authoritative reviews of interesting and affordable products, with clear buying recommendations.
- Cover Disks and CD-ROMs with demos so you can try software before you buy, useful utilities (specially chosen to complement features in the magazine), selected shareware programs, games, readers' contributions and much more.

Whether you're a veteran or a novice, we'll help you get more out of your Macintosh, whatever you use it for.

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Use your favourite Photoshop plug-ins directly within FreeHand 5.5, there's no need to launch Photoshop! Simply select a placed TIFF image on your FreeHand page and apply the filter. As well as supporting plug-ins like KPT Vector Effects, FreeHand 5.5 supports a whole range of Acquisition plug-ins, so you can scan directly into FreeHand too.

Create PICT images from any FreeHand graphic

FreeHand 5.5 now allows you to create PICT (bitmapped) images from anything created in FreeHand. The PICT can then be saved or copied into the clipboard. Creating anti-aliased text or pictures, for use in Macromedia Director, has never been easier.

Flow graphics into your text

Simply paste any image into a text block and FreeHand then treats it just like a text character! The image will then flow with text as you make changes.

10,000 pieces of clip art and 500 fonts FREE!

FreeHand 5.5 comes with 10,000 pieces of quality clip art with just about everything you need to make your artwork shout! And, there are 500 quality typefaces from Antiqua to Zirkus too.

Acrobat (PDF) file import

FreeHand is the only application able to import multi-page Adobe Acrobat files directly and then edit them.

Upgrade Pricing

FreeHand 5 to 5.5	£65
FreeHand x.x to 5.5	£125
Competitive Upgrade (from ClarisDraw, Illustrator or Canvas)	£149

Please call for 5-User and Education Upgrade pricing. All upgrades are supplied on CD. Limited floppy disk sets are available on request, please call for details.

For Upgrades and Information
0181 358 5855

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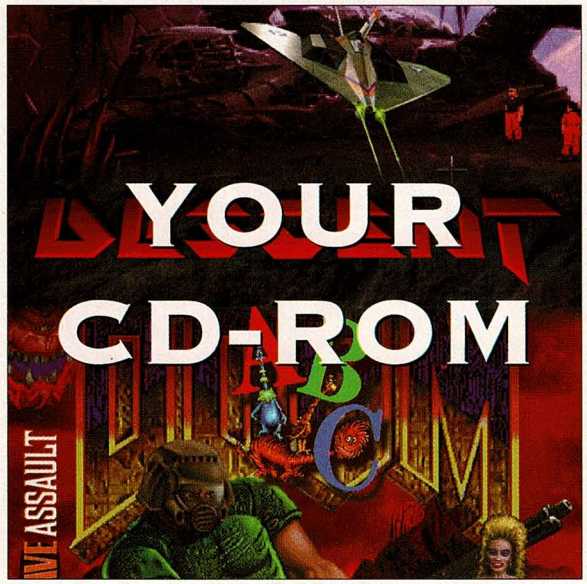


If CDs were animals, this one would be a big cat – powerful, graceful and stuck to the front of MACFORMAT... Well, two out of three's not bad! Colin Dalziel tells more.

If you're interested in using your Mac as a learning tool, look no further – this issue we have a special section of the CD entirely devoted to educational software. We also have our usual mix of the best games demos, interactive multimedia and entertainment software, so why not take a closer look at the mountain of software on the Cover CD this issue?

■ **Clip Photos:** 35 top quality high resolution photographic images from the *Corel* and *KPT Power Photo* collections at your disposal.

■ **Demos:** a wide selection of playable, interactive and rolling demos from the best software houses in the world for you to peruse.

■ **Education:** academically inspired software which takes you from your ABC to speaking foreign languages.

■ **Floppy:** all the software that's also on this issue's HD Cover Disk.

■ **Readers' Corner:** the corner of the CD reserved for your contributions.

■ **Resources:** essential Mac software including the latest versions of QuickTime and *Disinfectant*.

■ **Shareware City:** over 100Mb of the latest shareware and freeware releases to hit the Internet.

■ **Shareware in MACFORMAT:** all the shareware featured in our Shareware and PD pages, starting on page 110.

DAMAGED COLOR IT! FILES?

Some of the Convolution files for *Color It!*, which we gave away with MACFORMAT 31, were damaged. This was due to a fault in the mastering of the disc. We have included replacement files on this issue's Cover CD, so if you have installed *Color It!* on your Mac, all you need to do is copy the replacement files into the **Convolutions** folder, which is in the **Color It! Stuff** folder within the **Color It!** folder on your hard disk. Okay?

Descent

Game

Requires: PowerMac, colour monitor

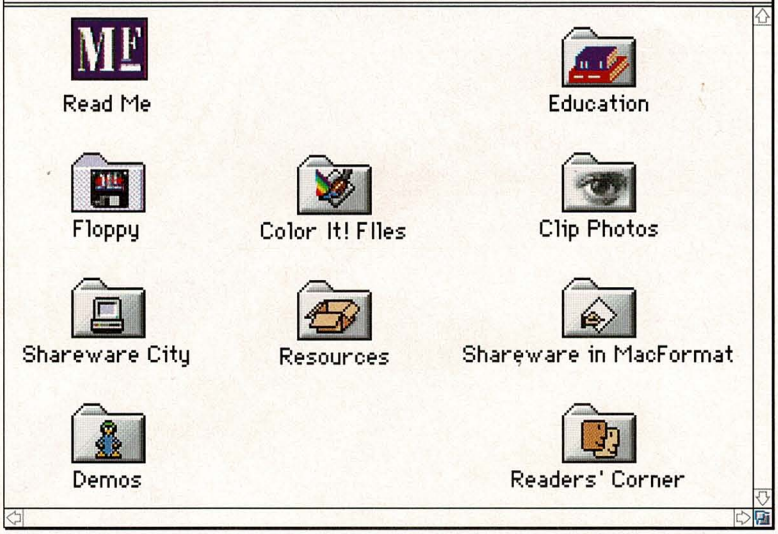
Descent is the latest action-packed game from MacPlay, in which your mission is to penetrate the robotic defences of a mining system and destroy the well-guarded nuclear reactor. You're briefed on your mission, then it's into your craft for some fast and frantic action. Your spaceship's sensitive controls help you navigate tunnels and confront various defensive forces – the closer you get to the heart of the mine workings, the more challenging the defences become. To reach your goal, you have to search all the tunnels to find the keys that give you access to restricted areas. This trial version provides three complete levels from the full 30 level version of the game, but you need 7Mb of free RAM and a PowerMac to play it.

Keep your finger ready on the trigger in the all-action demo version of *Descent*.

MacFormat 33

2.7 MB in disk

Utilities, games and applications



Doom

Game

Requires: LC475 or better, 4.5Mb of free RAM, colour monitor, System 7.1 or later

Doom has become a classic of the strategy shoot-'em-up genre, and this complete, original shareware version gives you full access to all the features of this addictive game. And it's not all just a matter of shooting and hoping – you have to use strategy and work out how to get through each level if you want to progress to the really big monsters and shoot them.

Demos

Various demos

Requires: see individual Read Me files

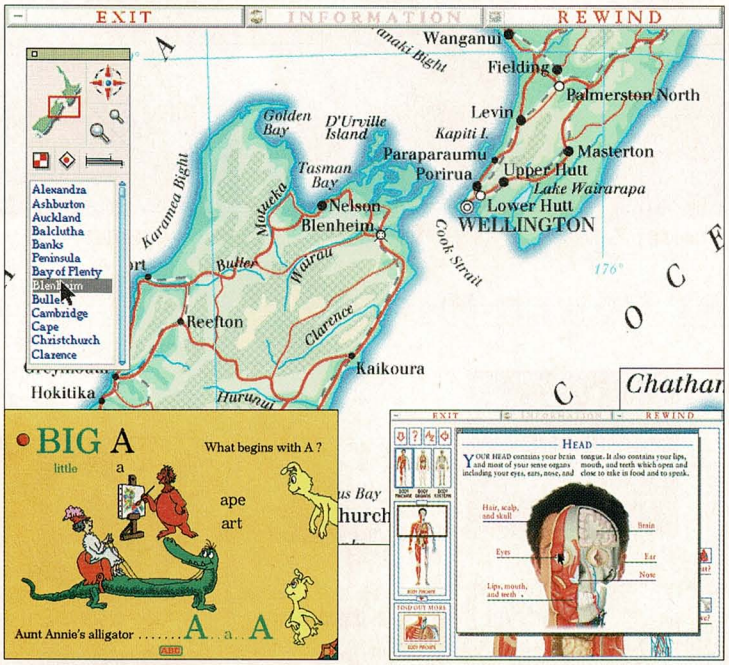
This issue we bring you a great selection of demos, including a playable version of *Shockwave*, the all-action flying game in which you take the controls as a fighter pilot on a mission to seek out and destroy the enemy. For music fans we have interactive demos of The Rolling Stones' *Voodoo Lounge* CD and *Total Distortion* – the way-out, rock-and-roll, role-playing game from Pop Rocket. Fans of LucasArts (and who isn't, after the release of *Day of the Tentacle*, reviewed on page 118?) are well served with two demos this issue: a rolling demo of *Full Throttle* shows you what this biker-based game has to offer, and *The Dig*, an archaeological puzzler that takes you to distant planets. We also give you a look at some of the titles we've reviewed in this issue of MACFORMAT, with demos of both of the *Wings* missions (reviewed on pages 100 and 101), and a rolling demo of *Oregon Trail 2*, which takes you across mid-western America (reviewed on page 124).

Visit distant planets, travel across mid-western America and fly high above Chile with this issue's fantastic collection of demos.

Educational Software

Various

Requires: see individual Read Me Files



This issue we devote over 100Mb of our Cover CD to educational software, including a wide range of demos and shareware. Among the collection are six rolling demos from Dorling Kindersley's series of interactive CD-ROMs, including *The Ultimate Human Body, The Way Things Work* and *The World Reference Atlas*. If you want to learn how to speak a foreign language, get started with HyperGlot's *Learn to Speak French* and *Learn to Speak Spanish*. And if your children are just beginning their education, get them to take a look at the wonderful *Dr Seuss's ABC*.

FontFont: An Apology

The CD-ROM distributed with MACFORMAT 20 inadvertently included several typefaces from the FontFont library published by FontShop International. We were not authorised to include these fonts on the CD-ROM and we apologise to FontShop International and the designers of the typefaces for infringing their rights. Future Publishing Ltd has accepted liability for copyright infringement and has now reached an out-of-court settlement with FontShop International. As the typefaces on the CD-ROM are neither freeware nor shareware, continued use of them would amount to further copyright infringements and we therefore suggest that anyone interested in these typefaces contacts either FontWorks UK (tel 0171 490 5390), FontShop International (tel +49 30 6937022) or your local FontShop (FontShop International have a dealer operating in many countries).

PROBLEMS?

If you have any difficulty quitting any of the rolling demos on the Cover CD, just press **[command] [Q]** and you should go back to the Finder. If this doesn't work, press **[command] [option] [escape]** to Force Quit.

Readers' Corner

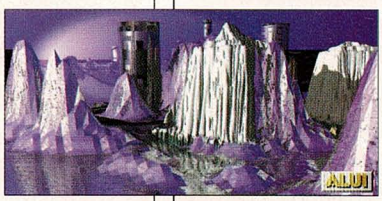
Your contributions

Requires: see individual Read Me files

Another bumper crop of quality artwork and software gets its first public airing on the MACFORMAT CD. This issue we have the latest version of *Colour Rotris* from Edward Brown, together with his tiny CD controller software *MiniCD*. Small Furry Lemming Enterprises have sent in *Best Fit*, which tells you the optimum amount of music you can fit from a CD onto tape. You enter the length of the tape, put a CD in the drive and the software works it all out.

In our Art Gallery we have a great image of a motorbike from Sean Cook, quality startup screens from A St Vaughan, and *A Book of Bones*.

We give away prizes every issue for the best contributions, so keep your work coming in to: Disc Editor, MACFORMAT, 30 Monmouth Street, Bath, Avon BA1 2BW



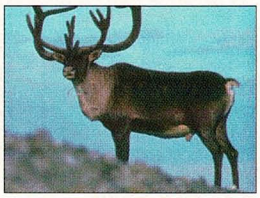
More top quality artwork on this issue's CD, courtesy of our talented readers.

Clip Photos

This issue we have 25 high-res clip photos from Corel's *Animal Life* CD pack and ten sample images from *KPT Power Photos 2*.

100025

103020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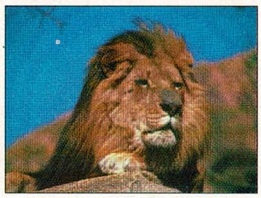
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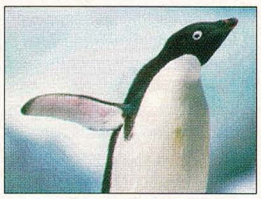
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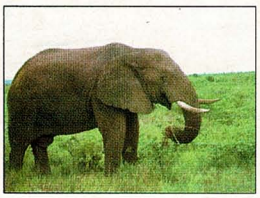
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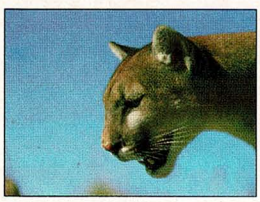
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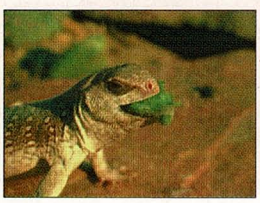
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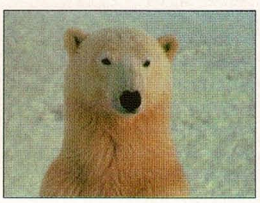
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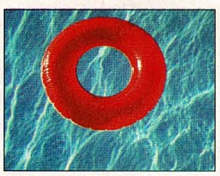
247018

KPT Power Photos

The ten sample images on this CD are from the *KPT Power Photos 2* collection. All the images are in RGB TIFF format, with LZW compression. We've also included ten lower res versions in PICT format, so you can still open the images if your system isn't suitable for high res graphics files – these images don't appear at the lower res in the original collection. See page 88 for some inspirational ideas on what you can do with these images in our review of *KPT 3*.

KPT Power Photos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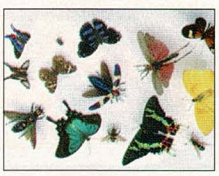
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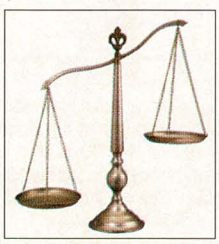
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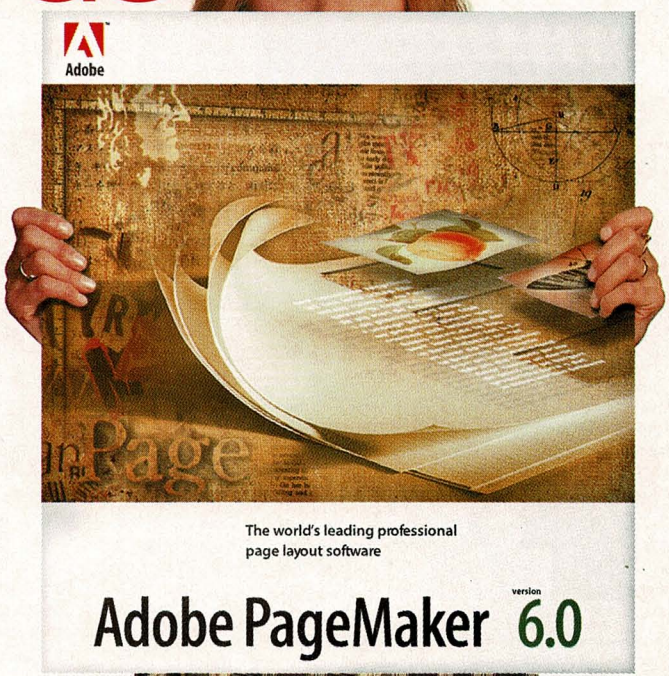

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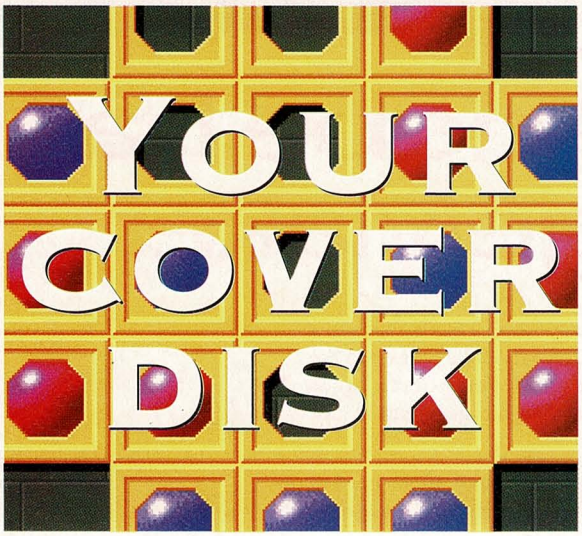


A new year dawns and we just keep on cramming more of the best software available onto the MACFORMAT Cover Disk. Colin Dalziel tells more.

Whether you use your Mac for playing games or more practical tasks, we have something for you. Games fanatics can have a go at the testing *Altair*, the frustrating *GravityBalls* or the challenging *Video Poker*. The excellent screen saver *Eclipse* can protect your Mac, *TextBrowser* will master difficult text files and there are plenty of handy utilities.

START HERE

High density floppy disks normally contain up to 1.4Mb of software, but to bring you as much as possible, we use a compression program to fit more on. So you need to decompress the software before using these disks, and this issue you'll need 2.5Mb of hard disk space. We also recommend that you always make a backup of the MACFORMAT Cover Disk, just in case anything goes wrong. Here's what to do...

1 Ensure the original Cover Disk is write-protected (move the tab so that you can see through the hole).
2 Insert the MACFORMAT disk.
3 Drag the Disk's icon over your hard disk's icon.
4 The contents are copied onto your hard disk, but are still compressed and cannot be used yet.
5 Drag the Cover Disk icon to the Wastebasket to eject the Disk.
6 Insert a blank high density disk.
7 Drag the MACFORMAT 33 folder from your hard disk onto the blank disk's icon to make your backup.

To decompress the Cover Disk, open the MACFORMAT 33 folder on your hard disk.
1 Double-click on the MACFORMAT 33 icon.
2 Click **Continue**.
3 A box then asks you where you want to save the software. Choose the place on your hard disk where you want everything stored and click **Save**.

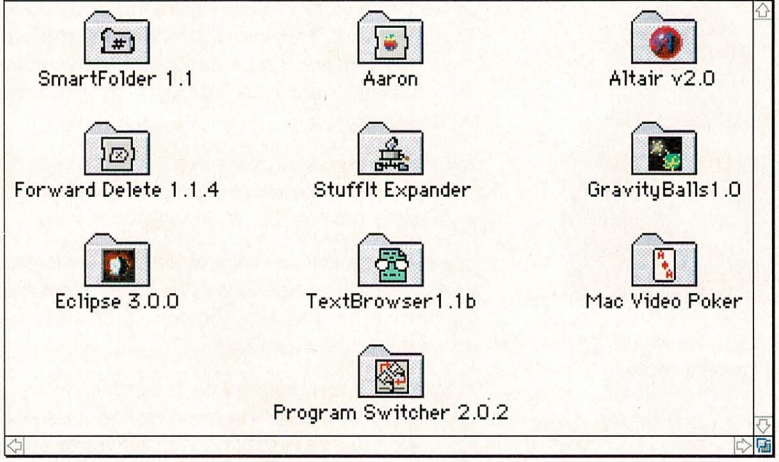
Before installing the Cover Disk, we always recommend that you back up any important work on your hard disk. This precaution will avoid problems should it transpire that any of the software isn't compatible with your setup.

We make every effort to check our Cover Disks for compatibility and viruses, but the information here is intended as a guide only, and MACFORMAT cannot be held responsible for any damage to data, any inability to use this software or any resulting losses. So please, take the precaution of backing up first.

MacFormat 33

2.5 MB in disk

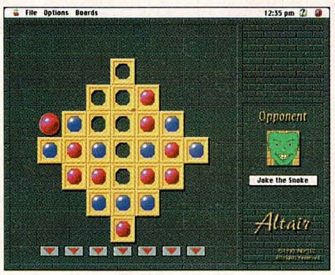
Utilities, games and applications



Altair 2.0

Game

Requires: LC or better, System 7 or later, colour monitor

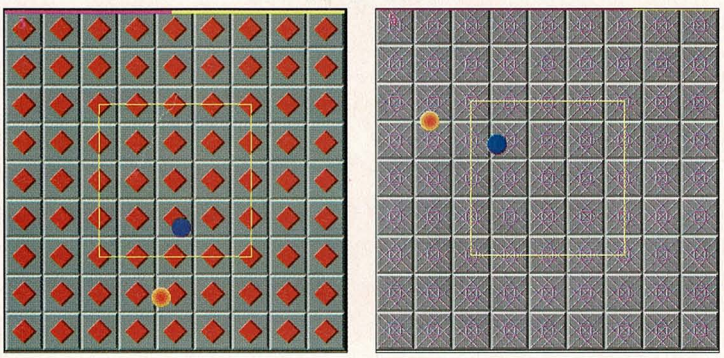


This is an addictive version of the classic board game *Connect 4*. Your task is simple: you must line four coloured counters in a row – the only problem is that you are up against the mighty processing power of a Mac. It's not all uphill though – you can choose between four levels of opponent, ranging from the easy-to-beat Barzo the Clown to the super-calculating Poindextra. When you think you're getting the hang of *Altair* on the normal rectangular board, try one of the different boards. You'll need to adopt some clever tactics if you want to succeed.

GravityBalls 1.0

Game

Requires: colour Mac, System 7 or later



GravityBalls is one of the most frustrating shareware games of the year. The challenge facing you is to force the game ball to stay within a predefined area using a ball which you control with the mouse. Your ball repels the game ball, so the closer you get to it, the faster it moves away. Keeping the game ball inside a square for eight seconds might sound simple enough, but you'll have to work at it for success. Once you get the hang of controlling the ball and you move through the first few levels, the predefined area gets smaller and the repelling power becomes stronger – so some frantic mouse moving is required if you are going to stay in control.

GOT A PROBLEM?

If either your cover-mounted high density disk or CD-ROM is defective, return it to us and we will replace it. Please make sure you have followed the installation procedures described in these pages correctly, to ensure that there is a physical problem with the disk itself. Otherwise, the replacement will be just the same!

Return HD disks to:
Discopy Labs
PO Box 21
Daventry
NN11 5BU

Return CD-ROMs to:
MACFORMAT CD returns
Future Publishing
FREEPOST (BS4900)
Somerton, Somerset, TA11 6BR

Enclose a self-addressed padded envelope (but we'll pay return postage) with the disk or CD, and a description of the fault. Please do not return disks or CDs to the editorial office; we don't hold any stocks of them and can only refer you to the addresses above.

Utilities

Various

Requires: see individual Read Me files

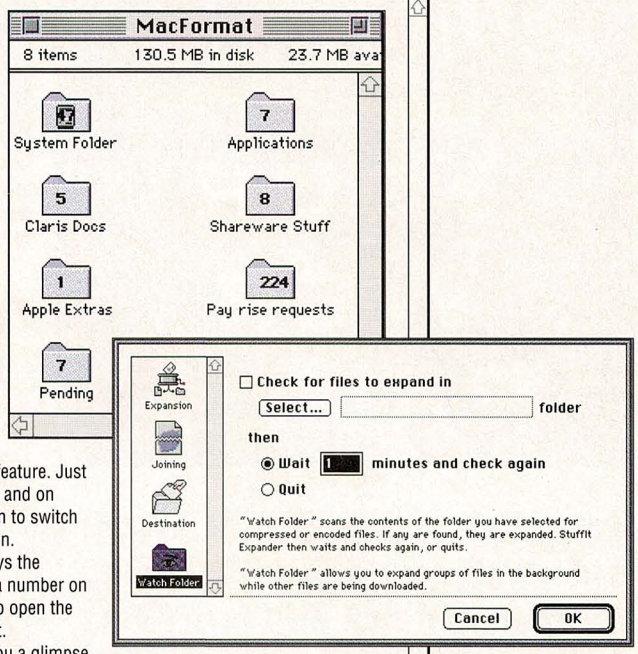
StuffIt Expander is particularly useful if you use the Internet. It enables you to convert files from standard compressed formats to more useful everyday formats, using a quick, simple drag and drop operation. *StuffIt Expander* also enables you to decompress files which have been compressed using *StuffIt* software.

If you have an extended keyboard, you may have found that many software packages do not support the **[forward-delete]** key. *Forward Delete* rectifies this shortcoming. Simply install this little utility and you can access the **[forward-delete]** function even on a basic keyboard, using the **[shift]-[delete]** key combination.

One useful feature that even extended keyboards don't offer is the ability to switch programs from the keyboard. With *Program Switcher* installed, however, any Mac can take advantage of this time-saving feature. Just drop this Extension into your System Folder, and on restart you'll be able to set a key combination to switch between whatever applications you have open.

SmartFolder is a simple utility that displays the number of items inside a folder by drawing a number on top of the folder icon. Now you won't have to open the folder to find out how many files are inside it.

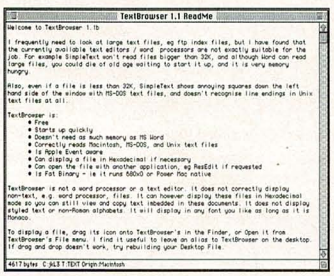
Aaron is a System Extension that gives you a glimpse of how the Mac might look after the introduction of System 8. Simply drop the Aaron Extension into your System Folder and restart your Mac for a whole new image.



TextBrowser 1.1

Text viewing software

Requires: any Mac



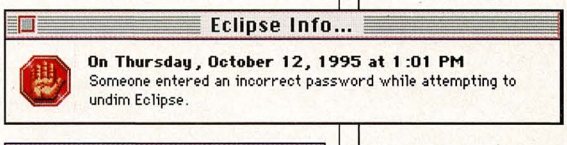
TextBrowser disposes of those annoying 'file too large' messages that appear when you try to open big text files with *SimpleText* or *TeachText*. You can avoid these messages by using a word processor, but that often takes too long when you only want to have a quick look at a file. *TextBrowser* can open and display almost any file in seconds, regardless of creator. The program only displays the basic text and none of the formatting or font information, but if you find you need any of the information in the file once you've opened it, you can copy and paste it into a more versatile word processor.

Eclipse 3.0.0

Screen saver

Requires: colour Mac, System 7 or later

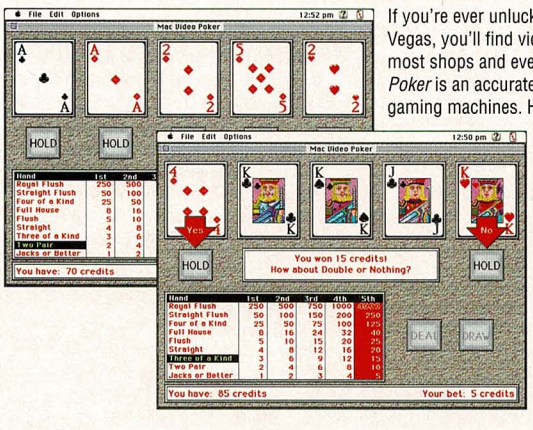
Screen savers are sometimes more fun than practical – they don't always actually save your screen, which is, of course, the job at hand. *Eclipse*, however, gives you a whole range of features that do actually help protect your screen from damage caused by displaying the same visuals for prolonged periods. You can elect to simply dim the screen, display a slide show or play a QuickTime movie. And if you need to keep your documents away from prying eyes (or you're just paranoid), you can set a security password. This means that if you are away from your Mac, no one else can deactivate the screen saver. *Eclipse* even tells you if someone has entered the wrong password, so you know if your Mac has been tampered with.


Eclipse Info...
On Thursday, October 12, 1995 at 1:01 PM
Someone entered an incorrect password while attempting to undim Eclipse.

Mac Video Poker

Gambling sim

Requires: colour Mac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Mac Video Poker
12:52 pm
HOLD
HOLD
Hand 1st 2nd
Royal Flush 250 500
Straight Flush 50 100
Four of a Kind 25 50
Full House 8 16
Flush 5 10
Straight 4 8
Three of a Kind 3 6
Two Pair 2 4
Jacks or Better 1 2
You have: 70 credits
12:50 pm
Yes
No
HOLD
HOLD
You won 15 credits!
How about Double or Nothing?
Hand 1st 2nd 3rd 4th 5th
Royal Flush 250 500 750 1000 4000
Straight Flush 50 100 150 200 250
Four of a Kind 25 50 75 100 125
Full House 8 16 24 32 40
Flush 5 10 15 20 25
Straight 4 8 12 16 20
Three of a Kind 3 6 9 12 15
Two Pair 2 4 6 8 10
Jacks or Better 1 2 3 4 5
DEAL
DRAW
You have: 85 credits
Your bet: 5 credits

If you're ever unlucky enough to go to Las Vegas, you'll find video poker machines in most shops and every casino – *Mac Video Poker* is an accurate recreation of these gaming machines. Having placed your bets, you're dealt five cards. As in real poker, you can hold on to any cards that have potential, or change the useless cards in the hope of something better being at the top of the pack. If you have a good enough hand you'll win some cash; if not, just try again. After all, it's only virtual money!

FLOPPY TOO

We are always on the lookout for readers' contributions for the floppy as well as the CD, so don't be put off just because you don't have a CD-ROM drive. Send them in to the address on page 6.

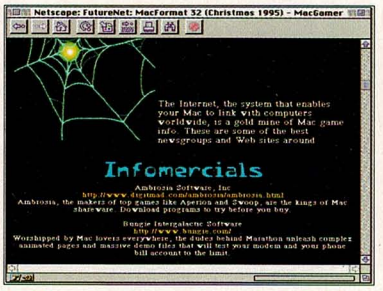
FutureNet YOUR WEB PAGES

If you have access to the World Wide Web, you can get a taste of Future's mags on FutureNet, our Web site. It's easy and free – you need a Mac, a modem and a service provider's connection.

Getting connected

All you need to connect to FutureNet is a modem and an Internet account like Demon or CityScape, or a direct server connection through work or college. There are no hidden charges – FutureNet is free! Just use your World Wide Web browser to connect to

http://www.futurenet.co.uk/


Netscape: FutureNet: MacFormat 32 (Christmas 1995) - MacGamer
The Internet, the system that enables your Mac to link with computers worldwide, is a gold mine of Mac game info. These are some of the best newsgroups and Web sites around
Infomercials
Ambrosia Software, Inc.
Ambrosia, the makers of top games like Apeiron and Swoop, are the kings of Mac shareware. Download programs to try before you buy.
Bungie Intergalactic Software
Worshipped by Mac lovers everywhere, the dudes behind Marathon unleash complex animated pages and massive demo files that will test your modem and your phone bill account to the limit

The MACFORMAT site now includes all the links that were mentioned in the free MACGAMER supplement that came with last issue.

The MetaTools site includes page after page of gallery images made with their software, including these from Kai Krause.

The FutureNet site is one of the busiest in Europe, giving you free access to all our magazines. There are archive features and news of the latest issues, plus special areas like the Forums where you can chew the fat with people who share your interests.

If you've visited us lately, you'll have noticed a small change – we've added a password system. We now ask you to register with your user name and password when you visit FutureNet. You'll need to fill out a form the next time you visit, then you'll be able to use FutureNet just as freely (and for free) as you did before.

We also ask you a few questions about yourself and your interests, which you're under no obligation at all to answer. If this seems obtrusive… perhaps it is. But one of the curses of the Web is that the people running the sites usually don't know anything about the people who visit; and considering the Net actually enables you to swap messages back and forth, that's a shame.

The password system genuinely helps us to get an idea of who you are – what your most and least favourite areas of FutureNet are. It's the same principle as placing live e-mail links on our Web pages, which enable you to get in touch with us directly. You know what we think through MACFORMAT – but we want to know what you think too. This two-way conversation is what the World Wide Web should be about.

Over 40,000 people registered under the new system in its first two weeks.

By the way, look out for the best entries to our Design a Web Magazine competition shortly. **RICHARD HILL**

Netscape: FutureNet : MacFormat, Issue 30 (November 1995) - Creat
MACFORMAT
Create a Web page
Discover freedom of expression on the Web, reveal your inner psyche to the masses, or just show them a picture of your dog. Neil Elkins shows you how.

MACFORMAT does more than tell you about the Web – it gets you involved with hints and tips on how to create your own pages.

LINKS FOR THIS ISSUE

You can visit any of the following Web sites by typing its address (which is given below each title) into the Location line of your Web browser. Alternatively, you can go to to the World Wide Web Road Map section of MACFORMAT's pages on FutureNet. There you can find direct links to each of these sites and any addresses mentioned elsewhere in the magazine, as well as dozens of others. This issue's links will maintained until at least Friday 22 March 1996.

Computing

Copland Info Home Page
http://www.netline.net/~austin/cops/cops.html
A 100% unofficial look at Copland, as Mac enthusiast Austin Shoemaker provides a site full of information, visuals and resources on the next generation of the Mac Operating System. There's an excellent guide to QuickDraw 3D, QuickDraw GX and other software technology that will be incorporated into Copland. Then you can add your suggestion of what Copland should include to the list of e-mail contributions.
Mac 96, page 37

RealAudio
http://www.realaudio.com/
RealAudio is one of the software systems that promises to transform the World Wide Web into a fully-fledged multimedia environment during 1996. It's also one of the first of these programs to have an early version available for the Mac. Once you've installed *RealAudio*, you can listen to clips of music and voice broadcasting that have been placed on the Net. There's a list of places around the world you can visit to try it out.
Mac 96, page 37

ScriptWeb
http://www.scriptweb.com/scriptweb/
AppleScript enables you to set your Mac free on automated tasks, while you sit back and relax. This site is a co-operative effort between several scripting enthusiasts, with hints, tips and resources on AppleScript and the Internet scripting program, *Frontier.*
AppleScript, page 79

Design and Graphics

Macromedia
http://www.macromedia.com/
Macromedia is among the foremost companies for the new media of CD-ROM and the Internet, with software like *Director* and *FreeHand.* Discover the latest news from Macromedia, visit the interactive gallery and download tons of free programs.
Mac 96, page 37
FreeHand 5.5 reviewed, page 86

MetaTools Inc.
http://www.metatools.com/
The company formerly known as HSC present the latest in 2D and 3D graphics, with information on software like *Kai's Power Tools, Bryce* and *Vector Effects.* Take a look at work created by MetaGuru Kai Krause and a host of other artists. Krause's 'Soft' is this issue's backdrop for the FutureNet logo at the top of the page.
Mac 96, page 37
Kai's Power Tools 3 reviewed, page 88

General

Random Internet Cameras
http://www.xmission.com/~bill/randcamera.html
This site connects you to dozens of pages that have live camera link-ups. If you want to see how Brooklyn Bridge, the corner of Hollywood and Vine or the famous coffee percolator at Cambridge University are looking right now, there are cameras pointed at each of these locations and many others. It may be short on detail, but few other sites on the Web can show you the world in quite such a literal way.
Mac 96, page 37

Jumplists

Cult of Macintosh
http://www.utu.fi/~jsirkia/mac/
This excellent jumplist adds a touch of humour to its exhaustive compilations of user groups, newsgroups and Web links.

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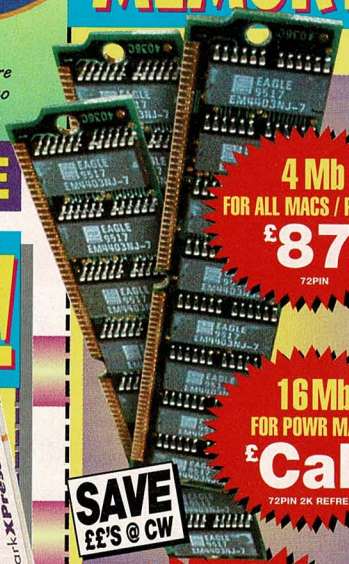

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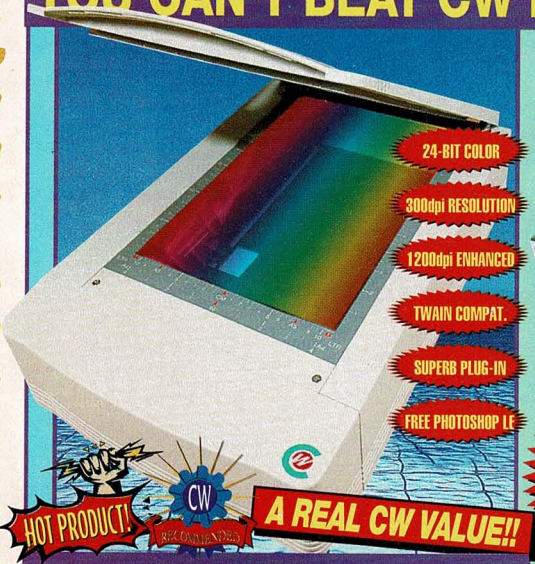

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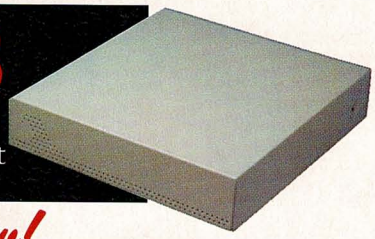

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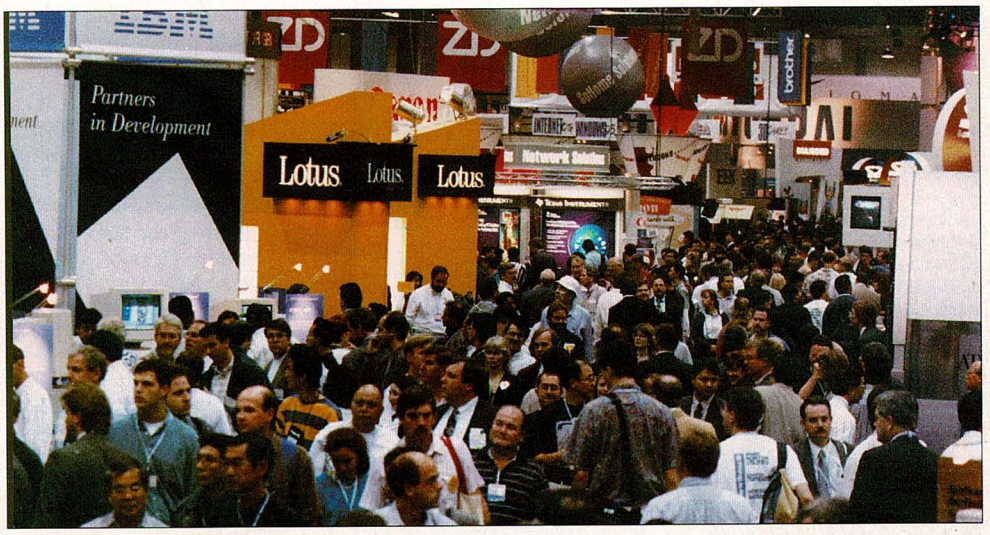
New Mac on the way, IBM to license Mac OS, Apple Expo draws the crowds, OpenDoc revolution. News by Richard Hill.

Mac's successor unveiled at last

The designs for the computer earmarked to one day replace the Mac have been unveiled. The PowerPC Platform is a joint project between Apple, IBM and Motorola to create a flexible computer for the next century.

Previously known as the Common Hardware Reference Platform, or CHRP, the PowerPC Platform was officially launched at the giant Comdex computer show, held in Las Vegas in November '95. This marked the final go-ahead for companies to create and sell computers based on the design.

The PowerPC uses the chip of the same name, manufactured by IBM and Motorola and popularised through its use in the PowerMac. It is able to run the Mac OS (operating system), which means that all or most of your existing programs will work on it. It will also run a variety of operating systems, which means it will support the use of all sorts of other programs. Motorola are writing a version of *Windows NT* (a more advanced form of Microsoft's *Windows* software), while IBM will contribute OS/2.



The packed show floor of Comdex was the stage for the official announcement of the PowerPC Platform.

THE POWERPC PLATFORM

Main processor	PowerPC chip
Minimum memory	8Mb, expandable to at least 32Mb
OS ROM socket	Must be included (for fitting Mac chips)
Disk cache	Optional
Hard disk	Size as required, can be SCSI or IDE
Floppy	Optional, 3.5-inch, 1.4Mb, auto eject and manual eject
CD-ROM	Optional, quad-speed, multi-session
Keyboard	Apple Desktop Bus and/or PS/2
Mouse	Two buttons (needed by some operating systems) Apple Desktop Bus and/or PS/2
Graphics	Up to 1,024 x 768 pixels
Sound	16-bit stereo, CD quality
System clock	Included
Printer	Serial and/or parallel ports
Networking	Optional
Infra-red connection	Optional

This is the minimum system requirement that companies must follow when making their PowerPC computers. They have a choice in some features, like the type of keyboard and printer sockets they use. Any OS, including the Mac OS, will recognise any of the choices offered. We've listed the requirements for desktop computers (such as Quadras, Performas and PowerMacs). The specifications for portable machines (succeeding the PowerBook) or servers (used to contain thousands of Internet pages or in large companies) differ slightly.

Nor is the choice of operating systems restricted only to those made by the Platform designers. Solaris, AIX and Netware are systems usually found on more expensive and powerful machines than the Mac – a sign of the PowerPC's potential to succeed in the demanding business world.

A surprise addition to the wealth of operating systems is the popular Amiga, used on many home and graphics computers. Amiga Technologies have announced their intent to convert the Amiga OS to work on the PowerPC, although this may initially take the form of a special spin-off 'PowerAmiga', because the OS relies on custom chips not found in the PowerPC design.

Amiga are also talking to Apple about using the emulation system that Apple created, which enables Power-

NEW MAC LICENSEE

Taiwan's UMAX Data Systems are the latest firm to decide to make computers based on the Mac. Their machines will be on sale early in 1996, but only in the Far East for the time being. They will also make PowerPCs later in the year, which will go on sale worldwide. You might know UMAX from their colour scanners.

Continued on next page

OpenDoc ready for action

Apple's long-awaited component software system is now complete. OpenDoc 1.0 is available on the Internet for anyone who wants it – and that includes companies who plan to write programs for it. This free availability means that the first software to utilise OpenDoc should appear in the next few months.

OpenDoc is a potentially revolutionary idea. You use it to create documents, into which you place components or parts, which resemble frames in a desktop publishing page. Each component can be something different – it might be a word processor, or a graphics program.

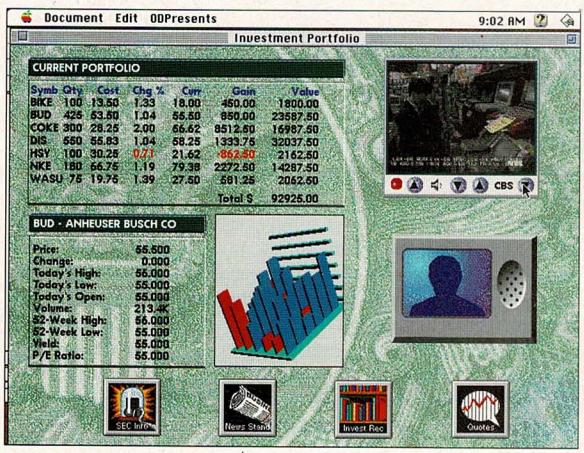
This gives you more versatility when you're working. You can decide which parts of the program to use – so you don't have to buy a program with dozens of features you'll never use just to type a letter. On the other hand, you can use lots of components together, assembling what amounts to a huge collection of features that are at your disposal and are completely tailored to your needs.

OpenDoc requires 8Mb of RAM and System 7.1, but works on both Macs and PowerMacs. The first OpenDoc components are expected to appear early next year. If you have access to the World Wide Web, you can download a copy of OpenDoc and some crude sample parts from **http://www.opendoc.apple.com/.**

For more information turn to our cover feature (starting on page 37), where Apple's Gina Centoni talks about OpenDoc.

BLUNDER

In the cover feature of MACFORMAT 32 – 'Works of art' – we managed to misattribute the software package *Painter*. *Painter* is actually produced by Fractal Design and distributed in the UK by Computers Unlimited on 0181 200 8282. Our apologies for any confusion caused.



The set of components codenamed CyberDog is an example of how OpenDoc will change the way you work.

MACDIARY

MACFORMAT's update of events taking place in the world of Mac.

■ BETT 96
Where: The National Hall, Olympia, London.
When: Wednesday 10 January to Saturday 13 January, 1996.
Price: Free.
What: Major education event, including the latest Mac software.

OPENDOC SUPPORTERS

These are some of the 300 companies who have already said they'll be producing OpenDoc components. The products listed after some names are what the firms are best known for, not necessarily what they'll be writing for OpenDoc:

- **ADAM Software (education and medical multimedia)**
- **Adobe** *(PageMaker, Photoshop)*
- **America Online (Internet software)**
- **Articulate Systems** *(PowerSecretary* **speech recognition software)**
- **Berkeley Systems** *(After Dark* **screen saver)**
- **Bitstream (fonts)**
- **Casady & Greene** *(Conflict Catcher)*
- **Claris** *(ClarisWorks)*
- **Global Village (modems)**
- **IMC (multimedia creation software)**
- **Maris Multimedia** *(RedShift)*
- **Metrowerks (programming software)**
- **Microspot** *(3D World)*
- **Novell (network software)**
- **Symantec** *(Norton Utilities)*
- **Virtus (3D graphics)**
- **Visioneer (PaperPort scanner)**

Continued from page 21

Macs to run programs written for the older Mac series.

Mac in the lead

The Mac OS remains the dominant system, despite all the alternatives, and is the most compelling reason to buy a PowerPC – in fact, without it, the PowerPC cannot succeed. Not only is any company that makes a PowerPC obliged to include slots ready for custom Mac chips, but IBM have also confirmed that they will be licensing the Mac OS to place on their own computers. As IBM's Tony Santelli said, 'The Mac OS opens to us complete new vistas for high volumes in the consumer and education markets.'

The PowerPC will use common types of chip and component rather than utilising the customised parts that the Mac uses. As a result, the supply problems that have dogged the Mac so often in the past (as it became a victim of its own success) should be far less likely to occur.

Apple, IBM and Motorola predict that their first PowerPC computers will go on sale in the second half of 1996, and a version of System 7.5 will be ready for the machine by then. But they may be beaten to the punch by other firms. Previous to their announcements, FirePower Systems stated that they would have a computer on sale within three months of the final specification being announced. And Power Computing, who already make Mac-compatible computers, have been working on their PowerPC for six months.

This illustrates clearly the main strength of the PowerPC. Companies are free to take the PowerPC design and either produce a 'standard' PowerPC or make it a starting point, adding extra features. Apple will be offering the Mac OS to any firm that can meet their minimum requirements (a liberal set) and that plan to include the OS on their machines. Apple earn a royalty on each PowerPC sold, and the Mac OS gains more users. To find out more about how the PowerPC Platform fits into the Mac's future in 1996, see our cover feature, starting on page 37.

PPC MAKERS

The following companies are committed to making PowerPCs:

Amiga Technologies	
Apple	Will include Mac OS
DayStar Digital	Will include Mac OS
FirePower Systems	
IBM	Will include Mac OS
LG Electronics	Will include Mac OS
Motorola	
Power Computing	Will include Mac OS
UMAX	Will include Mac OS

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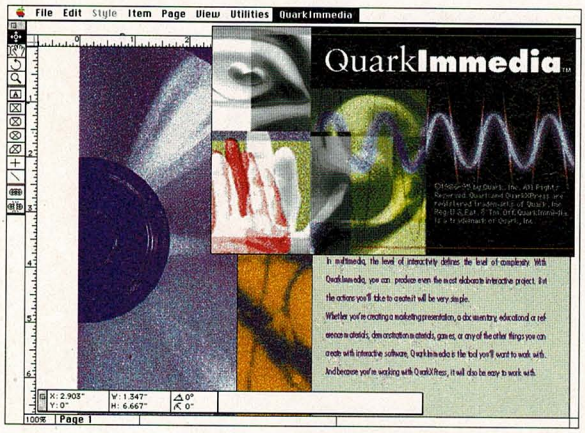
Apple's new vision at Expo

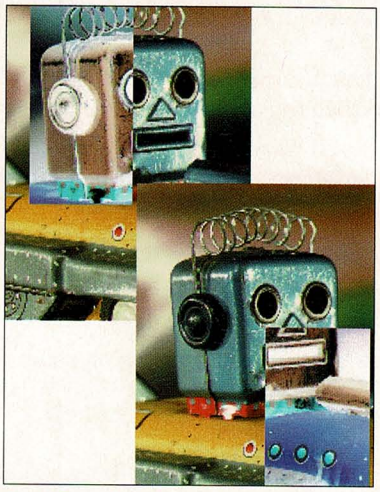
November's Apple Expo show at London's Olympia hall saw fewer big new product launches overall than in previous years, but certainly enjoyed a couple of major scoops. The availability of OpenDoc was announced (see story on page 22), preceding its American launch at Comdex by a week; while visitors were treated to full previews of forthcoming image editing and multimedia programs from Quark.

Apple Vice President David Nagel used the Expo conference platform to set out a vision of computing in five years' time, predicting 'universal and instant access to knowledge' through high speed wireless networks and 'information appliances' – simple computers for browsing the Internet (see the 'Newton gets rewired' story on page 26). He also presided over demonstrations of Copland, Apple's forthcoming new Mac Operating System, and OpenDoc, including a glimpse of CyberDog – Apple's Internet component software.



You can add *QuarkImmedia* to your copy of *QuarkXPress* to create multimedia productions.

PageMill takes the aggro out of making Web pages – look out for a MACFORMAT review soon.



QuarkXPosure is the latest software rival to *Photoshop*, the graphics market leader.

Big crowds were also drawn to the demonstrations of the new Quark software, which were held on the XChange International stand (XChange sell add-on programs for Quark software). *XPosure* is a powerful graphics program, while *Immedia* is an add-on for the *QuarkXPress* desktop publishing program that turns it into a full-scale multimedia creation system.

Adobe's *PageMill* enables you to create World Wide Web pages without getting your hands dirty in HTML, the language used to define the pages. Priced at around £100, it's due out early next year and could make Web design universally accessible.

As you might have seen if you were passing, the MACFORMAT stand was certainly kept busy with questions and subscriptions. It was good to meet you – see you next year!

Spin-off firms to close

The Mac operating system is the clear focus of future research by Apple.

Two ambitious joint projects of Apple and IBM are closing as the pair focus their efforts on the coming PowerPC Platform and supporting the Mac OS.

Taligent was originally intended to be an operating system umbrella, able to work on a variety on computers, with only one version of any program (see News, MACFORMAT 19). Any current programs must be rewritten if they are to work both on the Mac and PC-compatibles, for example. The work was later scaled down to produce *CommonPoint*, a program for creating software across several existing operating systems at once.

Kaleida Labs were formed to make programming tools specially for writing multimedia. Their Script X language enables you to create components similar to the ones in OpenDoc. Changes in one could affect the actions of another (see MacroScope, MACFORMAT 26). The closure follows Apple's own recent abandonment of Dylan, another component-based programming language.

Final decisions are still to be taken on how many alternative jobs for employees can found, but the work of these two firms seems unlikely to continue in any significant way.

New Year's Apple

Apple are throwing a huge New Year's Eve party in San Francisco – and you're all invited to come along! Scenes from the event, a series of concerts of music and comedy held at venues across the city, will be transmitted live on the World Wide Web. Apple will be using their QuickTime video and QuickTime VR virtual reality technologies to show you what's happening. It's taking place on a new site called QuickTime Live!, which will host other such events in the future.

Groups playing include Santana, War and the very cool Spearhead. For details, point your Web browsing program at **http://live.apple.com/**

Don't forget San Francisco is eight hours behind the UK, so you'll need to get up early on New Year's Day to catch the action. Happy New Year!

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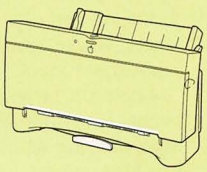

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Ethernet NB Card (requires transceiver)	160.00
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Rent-a-Mac

The well-known electronics rental chain Granada is to offer Mac Performas for rent, with an option to buy or upgrade after a certain period. The 'Option to buy' scheme, which enables you to pay for a Performa over three years, echoes several other schemes for PC-compatibles run by other stores. It's a sign of how seriously the Mac is being taken as a home computer, bringing it to customers who wouldn't normally see it.

Granada are testing the waters by making the Performas available in only 34 stores initially. Under the scheme, prices start from £54.99 a month for a Performa 6200 – a multimedia PowerMac with a quad-speed CD-ROM drive. After 38 months of payments, the Mac is yours to keep; but you also have the option of changing the Mac for a better model after 12 monthly payments. So you needn't worry about your purchase quickly becoming out of date.

The scheme also includes a demonstration in your own home and free delivery, installation and technical support. Granada are stocking the Performa 5200 and 6200 along with the Colour StyleWriter 2400 printer. Contact Apple on 0800 127753.

Education project reaches Britain

The Apple Classrooms of Tomorrow (ACOT) project, which explores the relationship between education and technology, is to include more schools – including the first in Britain to become involved.

St Andrew's High School in Fife joins the schools in the United States that have access to a wealth of computers and software through the scheme. ACOT is based on a belief that access to technology like cameras, scanners and the Internet – all working through the Mac – fundamentally changes the way students work and teachers educate. The project recently celebrated its tenth anniversary.

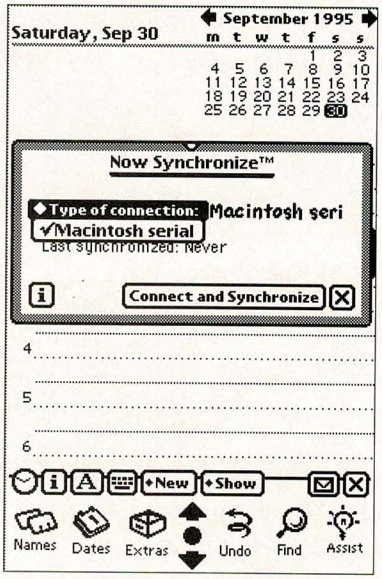
The Institut St Berthuin de Malonne in Belgium also joins ACOT, as the project expands to build a worldwide education community, exchanging experiences and ideas. More schools in Europe and the Far East are expected to join soon.

Meanwhile, a Japanese project to link 200 Mac-using schools through the Internet begins in April 1996. Students will be able to correspond by e-mail and create World Wide Web pages and digital newspapers.

Education has become crucial to Apple's success, with healthy markets in Britain and especially the United States, where around 60% of all schools use Macs.

Apple UK have also been holding events to introduce parents to the Mac, offering schools discounts on machines when their parents buy one.

The students of Stewart Middle School in Tacoma, Washington are already part of the Apple Classroom of Tomorrow project. You can visit their Mac-made World Wide Web page at **http://www.stewart.edu/**



The *NowSynchronize* program enables you easily to connect your MessagePad to your Mac.

Newton gets rewired

The MessagePad, Apple's much-derided pocket-sized computer, has bounced back with the launch of a new version of its Newton operating system. This comes as the Personal Digital Assistant (PDA) enjoys a new lease of life. The MessagePad is now better equipped to use the Internet, while its handwriting recognition abilities have been improved. Apple are in discussion with the giant Oracle Corporation for Oracle to use Newton as the basis for a planned computer, announced for summer 1996. It would be used by companies for basic tasks, such as writing or accessing the Net. It will be capable of doing little by itself, relying on a connection to a central computer to do the work. Dozens, or even hundreds, of basic devices could be linked to a main machine.

The device will use the same chip as the MessagePad, although it will look more like a typical computer than a PDA, and should cost less than $500 (£315). For more on Newton 2.0, see What's New on page 28.

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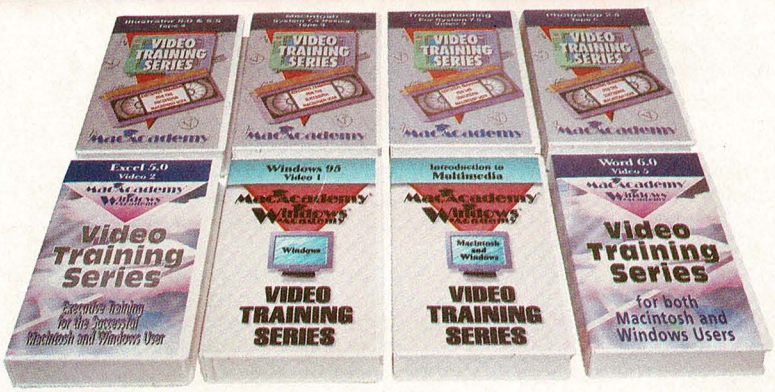
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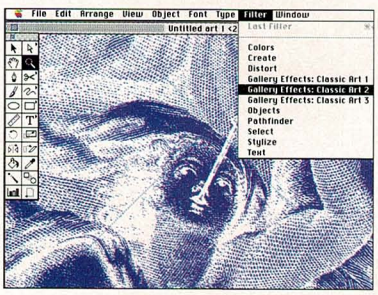
WHAT'S NEW

Discover the cream of November's Apple Expo, with the latest *Illustrator*, an inventive desktop publisher and Microsoft's Internet browser. Lindsay Bruce and Richard Hill are your hosts.

Illustrator 6

Adobe have announced a major upgrade to their design and illustration program, *Illustrator*. Version 6 now supports a broad range of file formats, including TIFF, EPS, PDF, GIF, BMP, MacPaint, PCX, Pixar, and Targa. *Illustrator 6* also uses *Photoshop*-compatible plug-ins – add-on extensions that give the program additional features or effects. You can now apply plug-in filters, such as those found in *Adobe Gallery Effects*, to an image without having to leave *Illustrator*.



You can now use *Photoshop*-compatible plug-ins like *Gallery Effects* in *Illustrator*.

You can make your palettes stick to the edge of the screen, keeping everything tidy and organised.

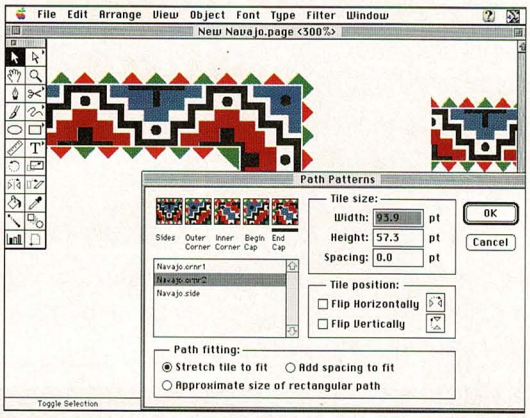
The program has been redesigned to make it more flexible. You can make palettes 'snap' to the edge of the screen, document window, or each other. The palettes' contents have also been redesigned – the Tools palette now sports Knife, Star, Polygon, Spiral and Twirl plug-in tools. Other companies can also add their own tools to this palette.

Transferring images to other Adobe programs has been made far easier. All you have to do is drag a selected object from an open *Illustrator* window straight into a *Photoshop* window – no cut-and-paste, no exporting to different file formats.

Any vector-based artwork created within an *Illustrator* file can be saved out as a bitmap-based file such as TIFF. Vector and bitmap are two fundamentally different formats suitable for different graphic tasks, but the ability to convert one to the other is rare.

The Eyedropper tool, used to pick up colours from existing pictures, can pick up colour from TIFF images within *Illustrator*, or from a *Photoshop* document in the background. It can even sample colours from the Finder.

Illustrator 6 also has a new Path Patterns feature which enables you to drop patterns onto a 'path'. You can also draw a 'path' (a guide which tells your Mac where you want to put the pattern) and then drop a pattern onto it without actually having to draw it yourself. The patterns can be edited, coloured, or moved, just like any other *Illustrator* object.



With the Path Patterns feature, you can indicate the line you want a pattern to follow; *Illustrator* then makes the pattern using pre-designed tiles.

Several features that came as add-ons in past versions are now an integral part of the program: most notable is the ability to produce the colour separations needed for high-quality colour printing within *Illustrator*. Previously, you had to do this in an image editing program such as *Photoshop*.

Illustrator 6 enables you to open, edit, and save *Acrobat* PDF (Portable Document Format) files, which means you can create electronic publishing within the program.

The upgrade will be available on floppy disk and CD-ROM. The CD also includes extra fonts and sample images, 12 plug-in filters from *Gallery Effects*, and a free copy of *Dimensions*, the 3D modelling and manipulation program. If you bought and registered *Illustrator 5.5* on or after 26 September, you'll receive a free upgrade.

- **Price: TBA. Out: early 1996.**
- **Requires: any Mac, 4Mb of free RAM (6Mb for PowerMac), System 7.0 or later, 13-inch colour monitor.**
- **For more details contact Adobe on 0131 451 6888.**

NEW FOR THE MAC

Word Internet Assistant

A free program for *Microsoft Word* gives you the ability to connect to the Internet from within the program. *Internet Assistant* enables you to use *Word* to visit World Wide Web, FTP and Gopher sites without using the variety of programs, such as *Netscape Navigator* or *Fetch*, that you would normally need. You'll still need the usual equipment, though, including a modem and a service provider's line, so that you can open the Net connection in the first place.

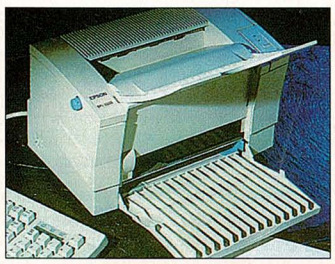
Internet Assistant also enables you to save documents in HTML, the language used to make Web pages, so you can create your own pages for the World Wide Web.

Internet Assistant should be available by the end of March 1996 from the What's New section (no relation) of Microsoft's Web site – simply point your Web browser software at **http://www.microsoft.com/**

Epson printer

Epson have introduced a new black and white laser printer for the home and small business user. The Epson EPL-5500ps is only slightly wider than a sheet of A4 paper and can print up to six pages per minute at a resolution of 600 dots per inch (dpi). The new printer comes with 5Mb of memory, a LocalTalk connection and a Level 2 PostScript interpreter – essential for using serious DTP programs like *QuarkXPress*.

The printer can hold up to 150 sheets of paper, and an optional base unit holds another 250 sheets. The EPL5500 uses Epson's MicroGray technology, which Epson say vastly improves the quality of printed graphics. The EPL5500ps has an RRP of £1,080, but the street price will be around £820. Contact Epson UK on 0800 289622.



The new black and white Epson laser printer is only slightly wider than an A4 page.

Monotype DTP CD

Monotype Typography have announced the release of a free CD-ROM for desktop publishers. Bundled with the *Monotype Font CD*, the *DTP Resource CD* contains over 300 plug-ins for *Photoshop, Illustrator, QuarkXPress, PageMaker,* and *FreeHand.* This means you can try out demos of plug-ins from a wide range of software companies before you actually buy them.

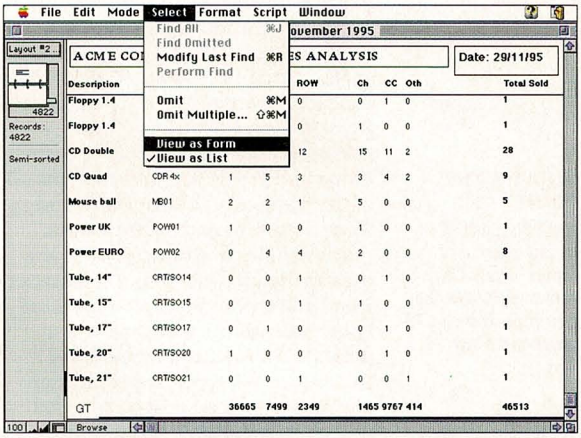
The *DTP Resource CD* is available from the end of December and is absolutely free, although you'll need to pay to use the full programs. You can call Monotype to receive a code to get access to the program you want – have your credit card ready. For more details, or to get the demo disc, contact Monotype on 01737 765959.

FileMaker Pro 3

The popular database program from Claris now gives you more flexibility when keeping and analysing records. *FileMaker Pro 3* is relational, which means it no longer treats files as entirely separate documents.

Relational features are usually found in more expensive database programs. You can use these to link files together, so if you have a name and address in one file that you want to use in a new file, you can create a link between them. The new file then refers to the entries under 'Name' and 'Address' in the original. This means it's much easier for you to keep track of changes to your records. Alterations to a core file of names and addresses, for example, automatically ripple out to keep other files up-to-date.

FileMaker Pro's scripting abilities have also been revamped, enabling you to design a script for your Mac to perform a specific set of tasks automatically. The ScriptMaker feature now includes ready-made scripts for entering new records, making phone calls to numbers in the file and reading and acting on AppleScript files (see page 79 for details on AppleScript).



FileMaker Pro now enables you to link your database files together, saving you tedious hours of entering records.

You can also write scripts that help your Mac cope with errors, such as data it can't process properly from the instructions you've given it.

- **Price: TBA. Out: January 1996.**
- **Requires: any Mac, 4Mb of RAM (8Mb of RAM with a PowerMac), System 7 or later.**
- **For more details contact Claris on 0181 756 0101.**

QuickMail 3.5

Long established as a tool for internal correspondence within a company, the latest version of CE Software's electronic mail program now offers more for the individual user.

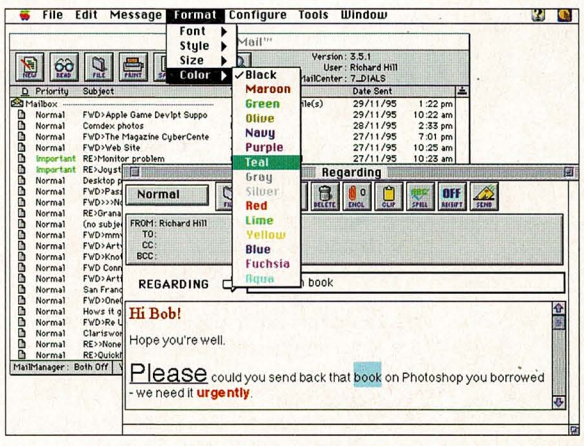
QuickMail enables you to send and receive messages, automatically organising them into folders and notifying you when a new message has arrived. It's most often used by two or more *QuickMail* owners, with packs available for 5, 10, 25, 50 or 100 users.

An Internet e-mail system has been added, enabling you to treat e-mails you send and receive in the same way as a *QuickMail* message. Other features include the address book, which enables you to create lists of people you write to regularly.

The Internet facility comes in the form of a ten-user sampler pack, which is free with every copy of *QuickMail 3.5* or any upgrade. You can add more users whenever you like.

The program is also easier to use. If you want to print or delete a message, or save it out as a text file, just click on its title in your list and drag it up to the button for any of these functions. If you're sending something to another user of the new version, you can style your text with different text sizes and colours, underlining any important points you want to make.

- **Price: from £170 for one user to £4,260 for 100 users. Out: now.**
- **Requires: LC or better, 5Mb of RAM, System 7.**
- **For more details contact Frontline on 01256 841841.**



With the latest version of *QuickMail* you can keep tabs on your e-mails and brighten up those urgent internal memos.

UniQorn

The first desktop publishing software to fully support Apple's QuickDraw GX graphics system, *UniQorn*, is a radical new page layout package from SoftPress Systems. It's an attempt to take on the likes of *QuarkXPress* and *PageMaker*, and contains all of the features you'd expect to find in these programs and more besides.

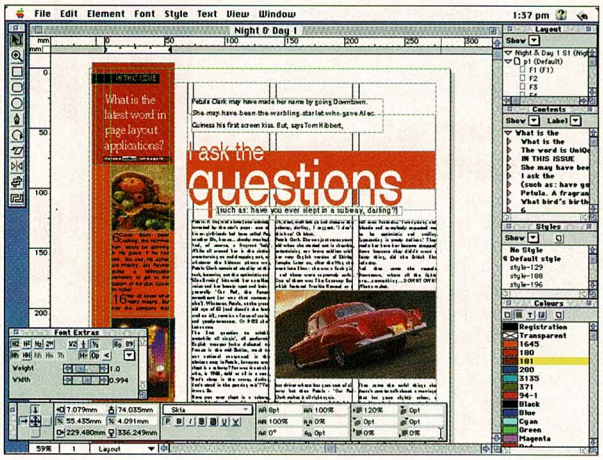
The abilities of QuickDraw GX are used to the full. Any font size between 1 and 1,000 pt can be accommodated in increments of a thousandth of a point, and a palette is provided for QuickDraw GX typographic functions like automatic ligatures – characters such as æ and œ that run together.

UniQorn enables you to open as many documents as your Mac's memory allows, and simultaneously display multiple master pages and layout pages of a single document on screen – a feature lacking in *XPress* and *PageMaker*. The program can even handle page sizes up to 33 square feet.

In keeping with the current trend, lots of the more frequently-used features have been placed in floating palettes, which are more accessible and faster to use than trawling through miles of menus. The Layout palette displays pages and sections and enables you to move either with a click of the mouse button. The program even has a decent spell checker, enabling you to check a document, story or selection – an area its rivals could stand improvement in.

WHAT'S THE POINT?

A point is a unit of measurement commonly used in publishing to describe type sizes. There are 72 points to the inch.


File Edit Element Font Style Text View Window
Night & Day 1
What is the latest word in page layout applications?
Ask the questions
Font Extras

UniQorn is a new desktop publisher that makes the most of Apple's QuickDraw GX system.

■ **Price: £1,060. Out: January.**
■ **Requires: any 680x0 Mac (non-PowerMac) with 12Mb of RAM, or a PowerMac with 16Mb of RAM; System 7.5 or later and QuickDraw GX 1.1.3.**
■ **For more details contact Principal Distribution on 01706 832000.**

Newton 2.0

It's now easier to connect a MessagePad to your Mac, and a keyboard accessory is available too.

Newton 2.0, the new Operating System (OS) for Apple's MessagePad range of personal digital assistants (PDAs), is the result of what Apple describe as 'two years of extensive customer feedback and user testing'. The new OS aims to make file transfers between your Newton and Mac much easier.

Apple are now bundling the MessagePad 120 with the Newton 2.0 OS, *Newton Back-up Utilities* and cables to connect your portable digital pal to your desktop Mac or PowerBook.

The Newton Operating System used on MessagePads has been rethought and revamped.

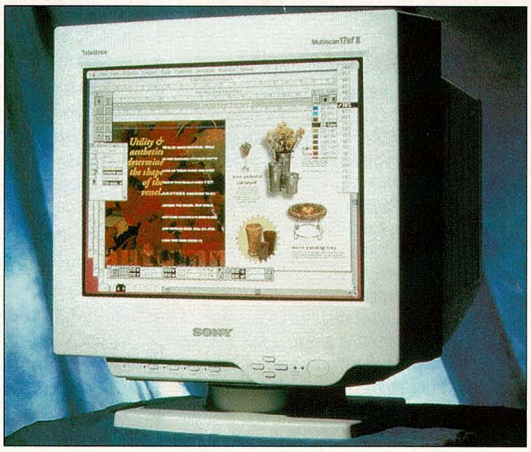
■ **Price: the latest MessagePad 120 comes with Newton 2.0 – £495; to upgrade MessagePad 120 to the Newton 2.0 OS – £94; MessagePad 110 upgrade – £305; MessagePad 100 upgrade – £353; older MessagePads upgrade – £423. Out: now.**
■ **Contact Apple on 0800 127753.**

Sony monitors

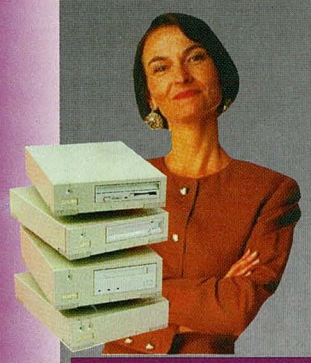
Sony have announced a new range of Multiscan Trinitron monitors, replacing their sf and se series with the new sf II and se II models, and introducing two new lines: the sx and the sh.

The sf and se 15-inch and 17-inch monitors are basically the same, but support on-screen colour adjustment, and a new 20-inch monitor joins the sf series – the 20sf II. The new 15sx is ideal for the budget end of the market, while the Multiscan 20sh is aimed at the more serious user, whom Sony describe as 'the out-and-out perfectionist'.

■ **Prices: 15sx – £410; 17se II – TBA; 15sf II – £464; 17sf II – £763; 20sf II – TBA. Out: the 15sf II and 17sf II are out now; the 15sx, 17se II and 20sf II are out in January 1996.**
■ **For more information contact Sony UK on 0181 760 0500.**



Sony have redone their entire range of monitors, with new approaches from the basic 15-inch to the 20-inchers for graphics professionals.



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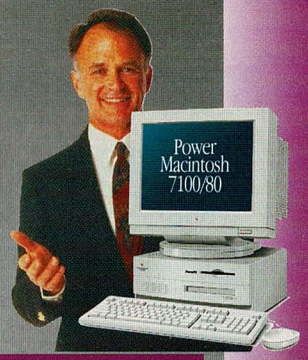

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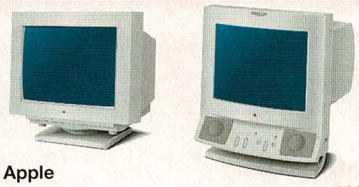

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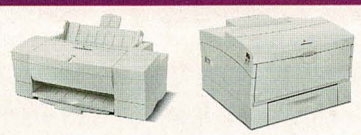

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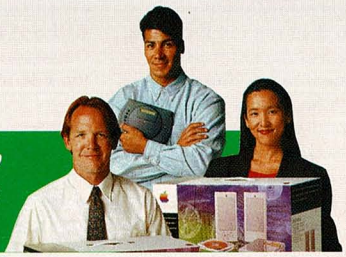

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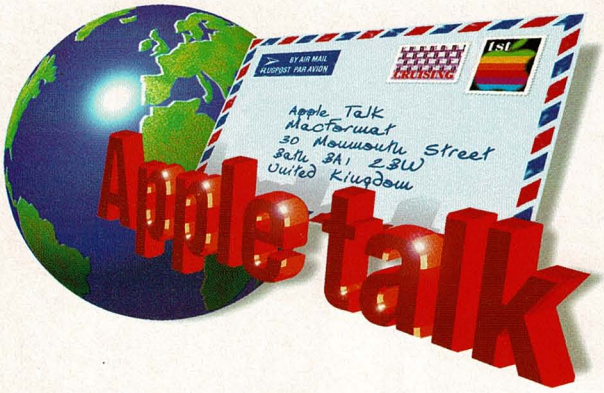

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There's a word for it...

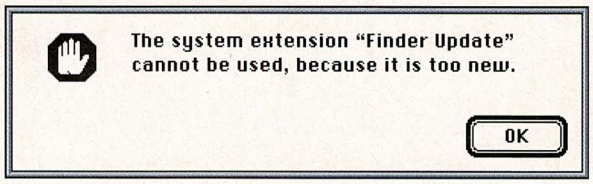
BUT IT'S UNPRINTABLE

I was interested to read William Campbell's letter in MACFORMAT 29 regarding the computer's role in translating texts from one language to another. Some while ago, I took part in such a software development project, and the languages chosen were English and Russian. To test the 'deviation factor' of the translation, it was decided to translate and 'backtranslate' several times, and then compare the original with the final result.

For one test, we chose the phrase 'The spirit is willing but the flesh is weak.' After translation backwards and forwards, this became 'The vodka is strong but the meat is rotten.' This certainly does 'lose something in the translation'. Both speech and translation are indeed creative processes.

Iain M Churches
Helsinki, Finland

And computers certainly can be stupid, can't they. But so can software authors...



Silly Things Your Mac Says, number 422. This one's from Alice Fage, via FutureNet. Has your Mac given you a silly message? Grab it with **[command] [shift] 3** and send it in to us!

Mysteryware

NEW SPECIES?

Every issue I really enjoy browsing through the shareware on the MACFORMAT CD-ROM, but almost every time I come across some piece of shareware that I would like to call 'mysteryware'. First there are no instructions about installing it. Yes, there is of course a Read Me file, but that usually contains a lot of technobabble about bugs that have been removed and how many upgrades the piece has gone through, with no information about where to install it. Is it an application? An Extension? Should it go in the Startup folder, in Control Panels or under the kitchen sink?

One method, of course, is to drop the piece onto the icon of the closed System folder and hope it will find its way into the right spot. This works most of the time, but sometimes the mysteryware just stupidly sits there.

Even assuming it gets to the right folder, the next question is 'What does it do?' Often the authors leave out this information too. Even after I restart my Mac and double-click the new icon, nothing happens. Yes, it is running – I make sure that it is – but is it supposed to fondle my fonts, sharpen my pointer, soften my hard disk, varnish my desktop, tickle my belly button or what? *Puhlease! What does it do?*

So finally, after several attempts to make it work, it is saved in the big round file called Trashcan. I'm very sorry, but the only thing I understood from the Read Me file was that the author wanted me to send him some money. Very cute, and this after wasting half an hour of my time. Please, just tell us what your brainchild is supposed to do!

Julian Hebbrecht
Osaka, Japan

Perhaps it's actually 'psychicware' – you'd already know if you wanted it.

Bigger, better?

THE HIDDEN COST OF CLARIS 4

Did I miss something, or did someone just forget to mention it? I delved into *ClarisWorks 4* and found all the goodies I was promised – that is, until I began to transfer files from version 3 to 4. Did anyone give fair warning of the considerable increase in file size when conversions were made? No wonder we are getting Zip and EZ Drives. By the time of *ClarisWorks 5* we may well need them!

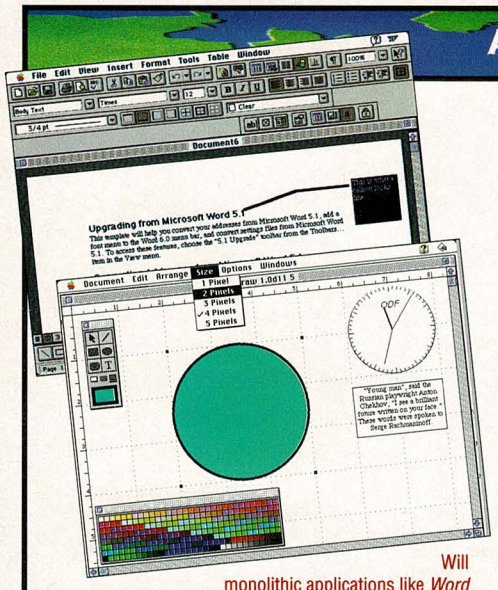
Martin Reid
Leslie, Fife

Caught in the Internet?

A BIT FISHY, IF YOU ASK US

The word 'surfing' is a word I've always hated. (I also hate the word 'ship', by the way. Why do computer products always 'ship'? It drives me crazy! Nothing else seems to 'ship'.

ANOTHER MOUNTAIN TO CLIMB?



Will monolithic applications like *Word 6* become obsolete now OpenDoc is on the way?

The world of software is like mountaineering. You think you are just getting to the summit and, lo and behold, another ridge to get over – or is it another upgrade? Why do people climb mountains? Because they are there. Why do people buy software? Because some brainy bod put it there.

I just wish the brainy bods would stop putting all the ridges in the way.

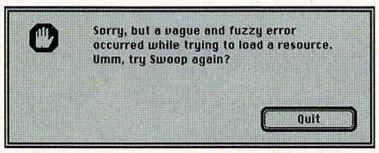
As manufacturing designers and screen printers, we obviously use the Mac. But for us the added sophistications of software upgrades are usually unnecessary, often unwieldy and more often than not require more memory. We possess computer controlled manufacturing equipment many times the price of the Mac with a fraction of the sophistication, and yet even with this modern technology we still have need of the old parallel motion drawing board, stencil knife and hand cut separations. After all, are customers really going to look at products on the shelves and say 'I wonder if that was designed on a Mac using *Illustrator version xx* or *FreeHand version xx*, or did some crafty little skilled chap do it all by hand'?

I suppose my problem is the same as most Mac users – I can't help but want to see what's over the next ridge. Maybe more specific end user targeting of software rather than the all singing and dancing approach would help those of us who rely on the Mac for our living to finally see the summit.

PS Call yourselves a Mac magazine and no eWorld address – Get Real!

Richard Fairfax
Oakwood Designs
via FutureNet

OpenDoc (see page 37) offers hope that huge 'all singing and dancing' applications will be replaced by smaller functional units, so you need only get the ones you want. As for eWorld: do we really need it, with AppleLink, CIX and FutureNet addresses?



This message, says the sender, 'occurred when trying to open the excellent *Swoop* from Ambrosia Software *[on last issue's MACFORMAT Cover CD]* on a PowerBook 150. What the Windows 95 does it mean?' We couldn't say, precisely... But oddly, the e-mail is signed 'Mr W Gates @ London.co.uk'...

Can I 'ship' a bar of chocolate?)

Anyway, back to surfing. Apparently it was made up by our Californian friends. Just because they like surfing and lacked the imagination to think up a better word, they thought 'Gee. Why not surf the Net, too?' Well, may I suggest the word 'fishing'? Surely it makes sense. What else do you do with a net but fish? When you fish, you chuck out your 'line', wait bloody ages, and hope to catch something useful – and you certainly need a lot of patience for it.

R K Bobal
via CIX

Me, I've always thought 'surfing' had connotations of just skimming the surface and trying to avoid getting out of your depth, which sounds about right to me...

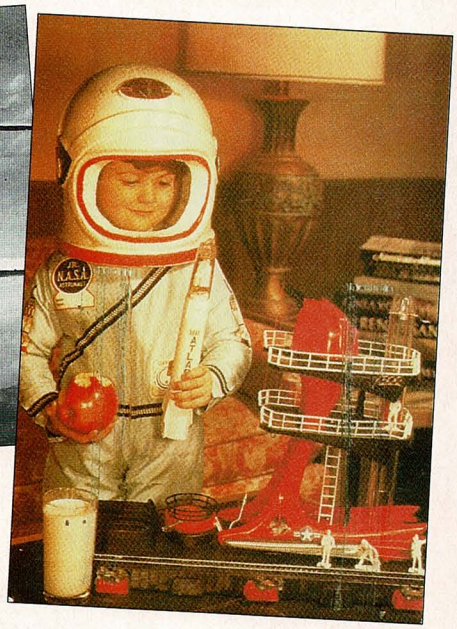
'Spare parts' you can't buy

TOO PRECIOUS TO SELL?

I recently bought a Performa 630 (System 7.5), the version without the internal CD-ROM drive, the reason for this being that I already owned an (external) Apple 300 drive. This obviously meant that I was not supplied with the backup CD. However, already owning a CD-ROM drive, I dearly wanted to get a hold of one so that I wouldn't have to back up on 37 floppy disks...

Guess what. The CD is 'not for sale as a spare part'. In other words – and in yet another example of Apple's eccentric attitude to capitalist enterprise – I'm not allowed to buy an Apple product that not only would make everything much more convenient for me, but a product that I should have been offered as an extra long before I realised that I needed it...

Yes, I know System 7.5 is available



on CD, but that's not quite what I'm after. I need the Performa-specific CD, which among other things includes the option to re-install the entire hard disk bundle (including *ClarisWorks*, etc) or just the System software.

Apparently this attitude is not untypical of Apple. According to one report I've heard, if you subscribe to Apple Assistance you get several CDs' worth of software for free. However, this software is not available to existing subscribers! What is it about Apple's reluctance to part with their products? Is it something religious?

Gunnar Petterson
via FutureNet

And another thing: why do Apple expect you to create backups of the pre-installed software yourself, instead of supplying a backup of ClarisWorks *and all the rest of it with the machine? If Performas are aimed at home users and novices, surely these are the very people who would find this burdensome (at best) or difficult (at worst)? Not the best introduction to the 'easy-to-use, ready-to-run' Mac, is it.*

System 8? Who needs it!

A CHANGE IS AS GOOD AS...

After reading in MACFORMAT about the System 8 interface I'd like to say that I share the feelings of those who dislike it. The new screen elements look badly thought out and silly, not the elegant Mac Desktop that we are used to.

In fact I have already been put off System 7.5 by bad bits of interface, such as the new colour picker, which is useless for people who actually need to know the RGB values of colours (for scripting, for instance). I like WindowShade too, and I would like rolled up windows to stay where I put them – not zip to the bottom of the screen where they are crowded and in the way. There is a virtue in simplicity which Apple seems not to grasp these days.

The grey embossed look is all very well but I would get tired of it day in and day out. I like Mac windows just as they are (though an extra button for WindowShade is not a bad idea). Apple should realise that they can deliver these improvements without having to redesign things that already work fine, and without piling on gimmicks that generate the kind of ridiculous size/speed hits that we have already seen in 7.5

Talking of 7.5, the only *really* good thing seems to me to be Drag and Drop, which I have of course got myself with 7.1.2. Unfortunately, few programs seem to support it. So far all I have found is *SimpleText*, *TexEdit-Pro*, *Finder*, *Netscape*, and *Open Prolog*. Perhaps you should publish a list of the programs that do – it might shame other manufacturers into adopting it.

D Donachie
via FutureNet

Drag and drop? I could live without it... if that meant I got 2Mb of RAM back. **MF**

Two more MACFORMAT binder winners: on the left, can this be what they mean by 'Open Transport'? The card was sent by S Laraghy of Den Haag, the Netherlands. Plus, wasn't the future wonderful? A lovely slice of nostalgia from Giles Tuck of Edinburgh. Remember, whenever you write to MACFORMAT or enter a competition, an eye-catching postcard could win *you* an exclusive binder too!

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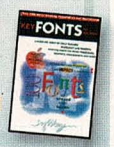

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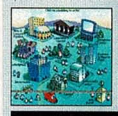

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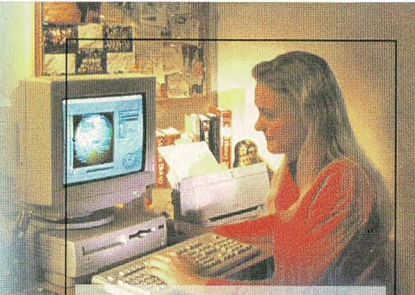

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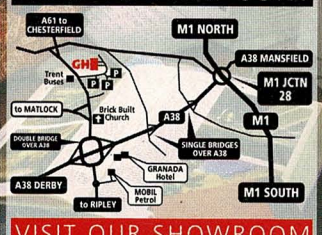

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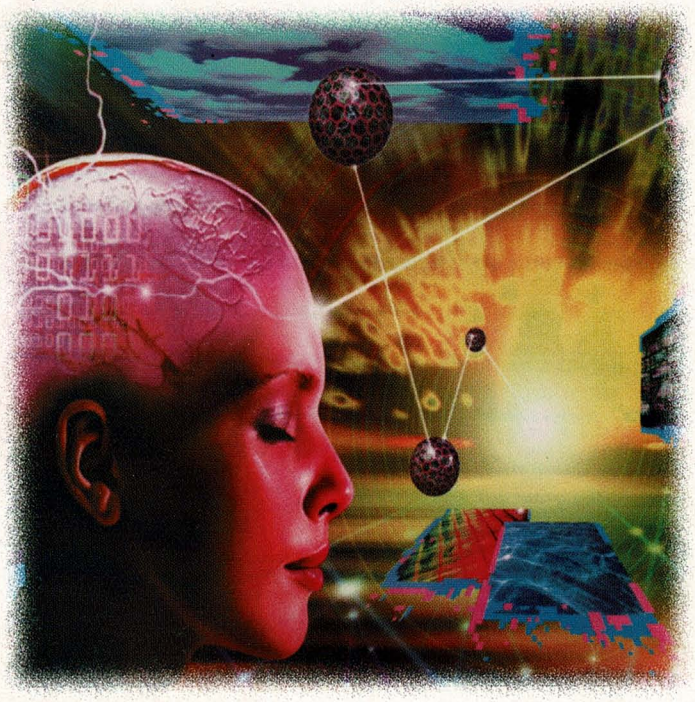

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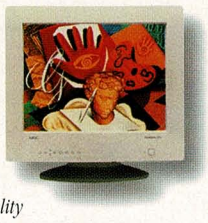

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Mac 96

1996 may be the hottest year in the Mac's history. In the next 14 pages, Richard Hill details 20 dramatic reasons why you may not recognise your Mac this time next year.

Dawn of a new age How the Mac itself will be changed forever ..... **Page 38**

Reaching out The key components that will make the Mac more versatile ..... **Page 42**

Power to the people The software technologies to hit the headlines in '96 ..... **Page 44**

Rise of the new media Multimedia and the Internet: the most explosive area in computing ..... **Page 47**

A new horizon Hints that 1996 is just the beginning for the new face of the Mac ..... **Page 50**

Big changes are coming to the Mac range of computers. By the end of 1996 you'll have a wider choice of machine than ever before.

Dawn of a new age

1 THE END OF THE MAC

The next 12 months will be the most radical period of change for the Mac you've seen in a long time. It begins with Apple ending their production of the Mac altogether, with the Performa 630 marking the end of the line.

The Mac has always been based around the 68000 chip series. Every Mac's main processor has been a 68000, 68020, 68030 or 68040, with chip speeds increasing as you go up the range. But chip speeds depend on skilled engineering, so there will always be a physical limit to how fast you can make a particular chip design go. If computer companies like Apple want to keep up with the competition, the only option left is to start from scratch with a new design.

This is precisely what Apple have done with the PowerMac. It's based on a more modern chip, called the PowerPC 601, and its successors the 603 and 604. Apple have been re-writing their OS (operating system) so that it works on the new chip, and as a result, the PowerMac has gradually become both cheaper and faster.

None of this means that you'll suddenly be unable to buy stuff for your Mac. With 18 million Macs out there, software companies will be writing programs for it for some time yet.

The switch over to the PowerMac has taken two years, and it comes to an end in the next few months. With both home Performas and business machines using the PowerPC chip, it's time to bid farewell to an old friend.

2 THE POWERMAC SPREADS ITS WINGS

The PowerPC chip is being used in both the PowerMac and the new PowerPC Platform, and is central to Apple's plans to create a more diverse range of computers to suit all needs.

A realisation that things must change is growing in the computer industry. Personal computers have created a revolution in society by enabling the individual to work and create more effectively, but they're not a perfect solution. They are too powerful for some people, while other users constantly need faster processors and bigger hard drives.

The idea of the computer itself needs rethinking so everyone can get what they want – easily and without spending more than they need to. This goes beyond the current split between the Performa for home use and the PCI PowerMacs for business. Machines are now being developed that just perform simple word processing and electronic mailing tasks, or run multimedia and games through a TV. At the other extreme, the PowerPC Platform will offer big business one of the mightiest and most flexible computers. And all this can be accomplished with different versions of the PowerPC chip.

The chip has improved steadily since the first PowerMacs were launched, with engineers creating ever-faster versions. You'll see the most powerful chips yet appearing in 1996. The 604e is an enhanced version of the 604 used in the 8500 and 9500 PowerMacs, while the 620 improves things even further.

The design process is likely to step up a pace, following the recent news that IBM and Motorola plan to pool their manufacturing resources. Until now chip designers have had to compromise, so that separate plants, working in different ways, could both produce the chip. A new, unified operation should spur the designers on to greater things.

JARGON BUSTER

A platform is simply a specification for a type of computer – the parts that are used to make it, the way they interact and the operating system the machine uses.

3 THE POWERPC PLATFORM

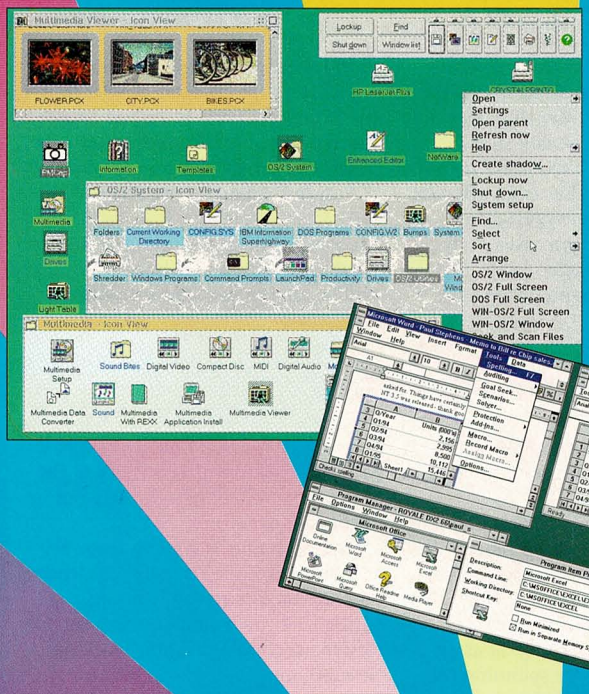
Later this year you'll be able to buy computers based on a new design called the PowerPC Platform. Previously known as CHRP or Common Hardware Reference Platform, the PowerPC Platform has been developed by Apple, IBM and Motorola.

There are two crucial differences between this new computer and your PowerMac. You'll be able to plug in printers, drives and other devices designed for PC-compatibles, as well as the familiar Mac devices. And you'll have a choice of operating systems to install, meaning that you have the widest choice of programs on any computer platform. Operating systems being prepared include the Mac OS, IBM's OS/2 and a version of UNIX, which is used by the most powerful Internet computers. There will also be a Windows NT version (aimed at networked PCs rather than home users). Because of these distinctive features, the new machine will initially be aimed at businesses.

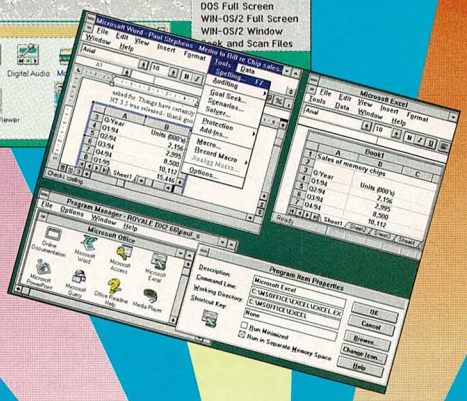
The PowerPC Platform has some fundamental differences from the PowerMac, although they have more in common with each other than either does with the 68K Macs. This means the Mac OS has once again had to be rewritten to work on the new machine. The first version you'll see is System 7.5, with Copland to follow. Both of these will run any PowerMac software without any difficulty, and will have very few problems running most of your Mac programs.

The launch of the PowerPC Platform doesn't mean that 1996 will see the end of the PowerMac as well as the Mac. If you use a Mac at home or in a college, the huge selection of Mac OS programs is likely to be all you need. You can expect to see PowerMacs and PowerPCs on sale side by side.

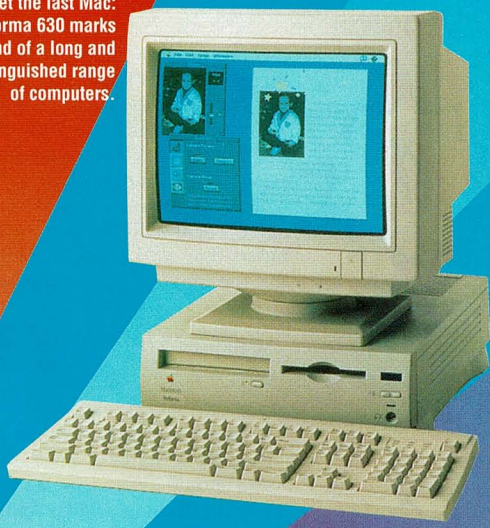
The main implication of the PowerPC Platform is that it gives Apple the chance to go for the business market with renewed vigour. It's part of their plan to spread the Mac OS far and wide, by making all sorts of computers to meet different people's needs.



You'll be able to use operating systems like OS/2 (left) and Windows NT (below left) as well as the Mac OS on the new PowerPC Platform.



Meet the last Mac: the Performa 630 marks the end of a long and distinguished range of computers.



The Power Player from Bandai is the first machine to use Apple's PowerMac-based Pippin design.

The PowerMac is headed for bigger and better things in 1996.

Continued on next page

CLONE ZONE

4

If Apple are to get more people using the Mac OS, they can't do it alone. The launch of the PowerPC Platform will take the trend that started with the first signs of Mac-compatibles, and send it onto another plane.

Seven companies have already made a deal with Apple to make computers that work just like PowerMacs. But the move to license the Mac OS has been hampered by the properties that made the Mac so attractive in the first place. Any computer that uses the Mac OS has to use specially-made components, which have been in short supply. This problem has even affected Apple, and put off potential suitors.

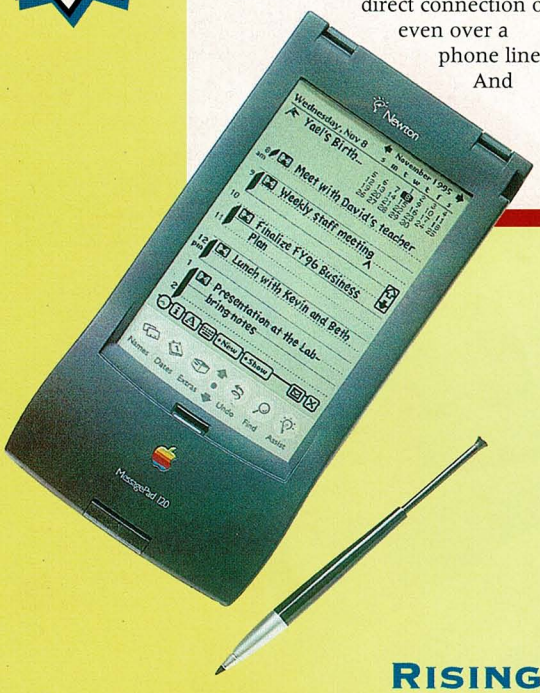
The PowerPC Platform uses parts that are made not just by Apple, but by many other companies across the world. Companies will be able to buy use of the Mac OS from Apple; then if they can't get parts from one source, there'll be plenty of others to choose from. The prospect is mouthwatering.

You can expect to see PowerPCs not only from Apple, but from IBM, Motorola, Power Computing, Radius, Canon, Hitachi and others. All of these will be able to use Mac software.

A SIMPLER COMPUTER

5

If you've looked at Newton and thought better of it, 1996 is the year you should look again. It's the design used in Personal Digital Assistants (PDAs) like Apple's MessagePad, and is important to the Mac on two counts. You can now use Newton devices more closely with your Mac, swapping information through a direct connection or even over a phone line. And Newton represents a possible future direction for the computer that could affect everyone.



PDAs are essentially pocket computers that you can use for basic tasks, no matter where you are. This innate simplicity means that the system can be adapted very easily. Businesses are starting to look at all the money that they're spending on providing a computer for every employee so that they can swap essential information – even if they don't do much else. The idea is emerging that it would be better to have one or a few main computers controlling many devices through a network of connections across a company. The all-round versatility of the Mac and other computers may not be needed by everyone.

One of the firms leading the way in making this idea a reality is Oracle, who are talking to Apple about basing their own small devices on Newton technology. Their work on Newton, and their vision of more flexible computing, mean that Apple will have a vital role to play in the future growth of the network device. Apple's Vice President David Nagel said recently, 'As far as I can detect, we are probably the only people who can do one.'

RISING SON

6

Pippin – Apple's CD-based 'entertainment centre' – is an example of the versatility of the PowerPC chip. It turns the home computer into something that can sit comfortably in your living room, just like a video recorder or a TV. You might like to think of it as 'Son of Mac' – a more basic version of the Mac you already know.

Using a computer like Pippin really couldn't be simpler. You plug it into your TV, open the CD-ROM drive and bung in a CD. The software on the disc loads automatically and away you go. CDs have to be specially designed to run on Pippin, but they'll also work on any PowerMac.

Pippin is the name for the platform, but you'll see it appearing under several names – just as there are different Mac-compatibles. Apple are unlikely to be making Pippin devices themselves for the time being – Japanese firm Bandai will be the first to put machines on sale, in the form of the Power Player, which the Japanese will be able to buy in Spring. American and European launches will follow later in the year, and you should expect other companies to make their own versions.

Bandai's plans for the Power Player give some idea of what it can do – they see it as far more than a games machine. There'll be a telephone adaptor, enabling you to connect the Player to the Internet, getting you online for far less money than buying a Mac or other computer. And you'll be able to get a floppy disk drive and keyboard, enabling you to perform everyday tasks like word processing, sending electronic mail or doing the accounts.

Pippin has the potential to give people access to basic computing at half the price of a typical computer, opening up a whole new audience.

Continued on next page

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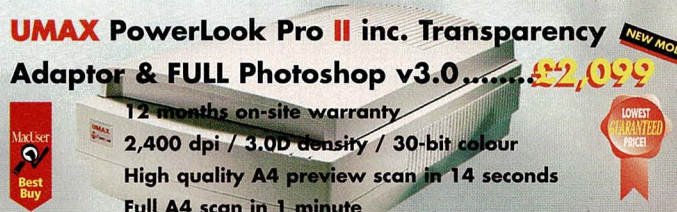

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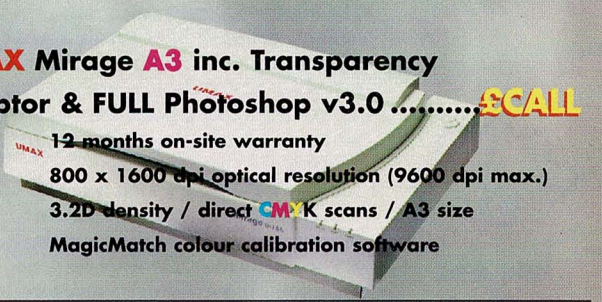

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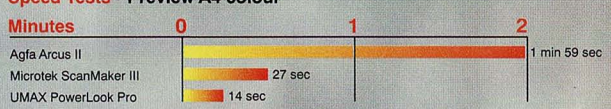
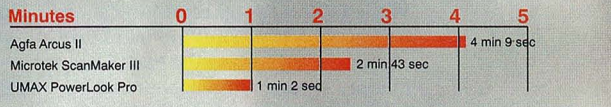
What is it that makes **UMAX** scanners so popular? Take a look at the **MacUser Labs** results below (Vol 10 No 19) on the best-selling PowerLook Pro and see for yourself...

Speed Tests - Preview A4 colour

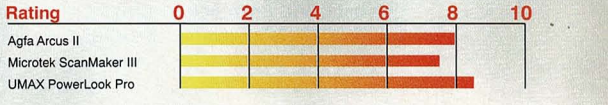


Speed Tests - Scan A4 colour



Scan Quality - A4 colour image (300 dpi)

Scan Quality - 5in by 4in transparency test



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The hardware setup of the Mac is becoming more standardised, enabling it to communicate better with other computers and devices.

Reaching out

THE INSIDE JOB

Expansion cards enhance the features of your Mac – the most popular kinds are for graphics acceleration and networking. The existing system used in most Macs was Apple's NuBus, but they've now moved to PCI (Peripheral Component Interconnect). This new system is cheaper and faster than NuBus – a PCI card can send out data at 90Mb a second, compared to NuBus' 32Mb. And PCI is already widely used across the computer industry – any PCI card that fits in a PC will also go into your PCI PowerMac; all you need is a small Mac-specific program to control each card.

Cards designed to go on older systems are having to be redesigned from scratch, but 1996 will bring more choice and better value than before. Fresh uses for the improved speed PCI offers include MPEG video, QuickDraw 3D, DOS compatible cards and... NuBus. You can get a PCI card that hosts your old NuBus hardware – so you don't have to throw out your entire setup when you upgrade.

Power Computing offer an imaginative range of Mac-compatibles called PowerWave, which are able to accept both PCI and NuBus cards. You can remove your NuBus slots and have extra PCI slots instead, meaning your investment in NuBus won't be wasted while you take time to move up to PCI. And PCI is important for the PowerPC platform. You'll be able to buy a card, confident that it will work with programs written for different operating systems.

LEARNING TO GET ALONG

The question Apple's customer helpline centre in the USA are asked most is, 'How do I use DOS disks on my Mac?' Choosing whether to buy a Mac or a PC is one thing, but you expect to be able to swap information between the two.

Apple have gone a long way towards offering Mac owners the best of both worlds. If you have System 7.5 or a copy of *PC Exchange* on your Mac, you can now shove a disk formatted with the PC's MS-DOS operating system straight into your Mac and look at what's on it. You can view PC CD-ROMs just as easily. You can even load some PC files, like *Word* documents or images, into Mac programs. If only every PC was this accommodating when it came to Mac documents and disks.

More recently, Apple devised the DOS Compatible card, a hardware board you can plug into many Macs to give you a Mac and a PC in one case. Reply Corporation and Apple are gradually tailoring the idea to fit each type of Mac, a laborious process that will become unnecessary once PCI is more widespread.

Next year you can expect to see a speedy Pentium computer on a PCI card, which will slot into any Mac you can buy – a one-stop solution that neatly illustrates the whole point of PCI. Cards will be available from Apple, Reply, and other firms like Orange Micro. The cards work as independent computers, with your Mac playing host by sharing its hard drive and CD-ROM. They'll have their own memory, so you'll be able to run both Mac and DOS card at once. Once PowerPC Platform computers are on sale late in 1996, you'll be able to plug in a DOS Compatible card and add an extra system to this multiple-OS environment. This opens up the prospect of an all-in-one computer – a box that can run any program, no matter which OS it was written for.

FIREWIRED UP

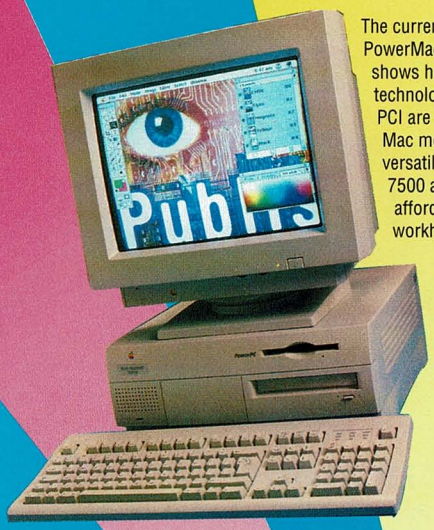
While PCI speeds up communication within your Mac, FireWire takes care of linkups outside. At the back of your Mac are several types of connection port: SCSI for extra hard disks or CD-ROM drives, composite video, and LocalTalk or EtherNet for printers. One day all of these could be FireWire.

A joint project between Apple and Texas Instruments, FireWire is a high-speed system for connecting various devices together and sending information back and forth between them. The slim FireWire leads and petite sockets look similar to those used by LocalTalk, but send data much quicker.

This would wipe out the limitations of SCSI. The fastest SCSI connections on a Mac can send data at 5Mb a second, compared to FireWire's mouth-watering 16Mb. You can plug in new devices without having to switch off your Mac for safety, and you don't need to worry about setting up separate identification numbers for each device yourself. And while you can only plug seven SCSI devices to your Mac, FireWire can connect up to 63. Machines that could benefit from FireWire include hard drives, scanners, printers, still and video cameras, CD-ROM drives and video recorders. In some cases you could bypass the Mac completely – you could hook up, say, a camcorder to a video recorder to make a VHS tape without fuss.

Texas have already shown a prototype printer with FireWire, while Sony have a couple of digital video cameras available – using these you could film a scene, then send it down a FireWire connection straight into your Mac, ready for editing. The convenience is obvious. The cheaper Sony camera is £2,700, but then, all electronic items start off expensive, before prices crash.

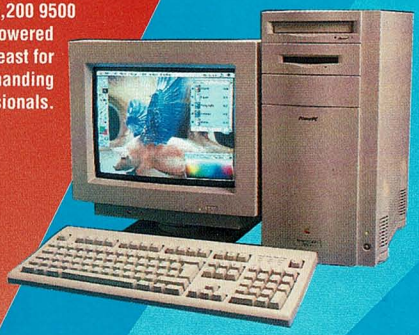
The first you're likely to see of FireWire on the Mac is a card that you place into a PCI slot, which you can plug FireWire-bearing devices into. However, in years to come FireWire sockets will adorn the back of your Mac like SCSI, LocalTalk and all those others do today.



The current PowerMac range shows how technologies like PCI are making the Mac more versatile, with the 7500 as an affordable workhorse...

7

...and the £5,200 9500 is a super-powered graphics beast for demanding professionals.



You can get a PC-in-a-box for many types of Mac, but next year's PCI card is a one-size-fits-all solution.

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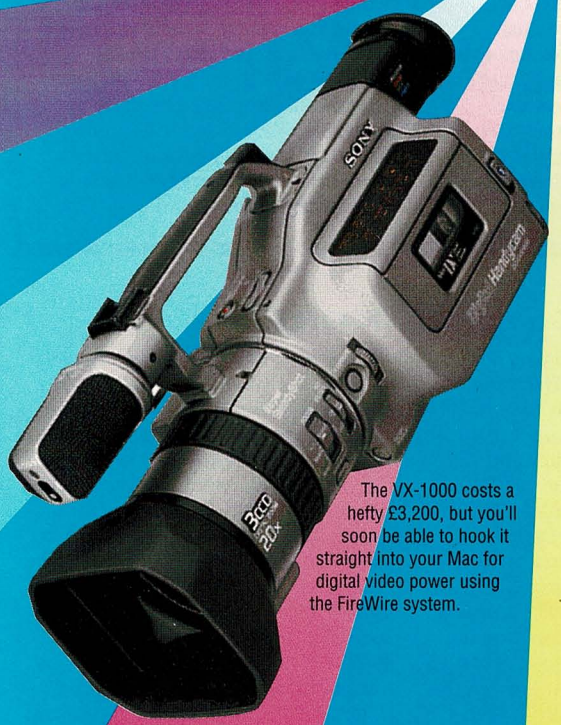
Continued on next page



The VX-1000 costs a hefty £3,200, but you'll soon be able to hook it straight into your Mac for digital video power using the FireWire system.

9

If you thought there were certain things you'd never be able to do on a Mac, 1996 is the year that will make you think again.

Power to the people

THE MAC'S EXTRA DIMENSION

The enticing vistas you make with 3D software are to become more detailed, faster to make... and they'll move. QuickDraw 3D, an Apple System Extension for PowerMacs, will enable you to create 3D models and backdrops, as with programs such as *Strata Studio Pro* and *Infini-D*, but it has a few extra tricks up its sleeve. Apple have designed QuickDraw 3D so that you can speed it up by up to 12 times. The QuickDraw 3D Accelerator Card is one of the new PCI cards you can fit into the latest PowerMacs and their successors. The combination brings the Mac near the speed of graphics workstations like the Silicon Graphics Indy (for 3D work, at least), at a fifth of the price. At £350, the Accelerator Card is a good basic starter for professionals, and suitable for home use. Expect to see games like *Descent* and Reality Byte's *Havoc* using the system to offer the ultimate games experience.

The card will be followed in 1996 by rivals, many based on the GLINT chip, designed by 3Dlabs – a prominent example of how Apple's adoption of PCI is encouraging important companies to develop for the Mac. The implications of this increased power are wide. 3D is becoming more than just an extravagance – a QuickDraw 3D component written with OpenDoc can be used in any document. 3D will affect every aspect of how you use your Mac.

IT'S GOOD TO TALK...

...but it's even better to see. Video conferencing offers the attractive option of being able to see the person you're talking to on the phone, transforming one of the most common forms of communication. The technology enabling you to do this has existed for some time, but it's been too expensive for many people to take up – and it's no good having a video phone if no one can see you.

Video conferencing has had to rely on costly hardware cards installed on powerful computers, so that the signals can be sent and received quickly enough. But developments mean that the idea is now more affordable than ever. VideoPhone from Connectix is an aggressive attempt to bring the price of video conferencing right down. A pack containing the software and a QuickCam (a tiny camera that sits on top of your Mac and takes QuickTime video pictures at about 15 frames a second) costs just £199. A colour version will be out soon.

Less basic but more expensive cameras include the FlexCam, available through Gomark, and Sony's PC Cam. Because the cameras use Apple's built-in QuickTime video system, any Mac owner can use them.

The uses of video conferencing have been limited because of the lack of fast, cheap connections for the Mac, but the spread of systems like ISDN and FireWire make live video transmission on the Mac not only a serious proposition, but genuinely easy. With faster connections, you can set up video sessions within a large office or get in touch with people half a world away over the Net. In fact, you've been able to get a primitive form of video over the Net's World Wide Web for some time, and this can only improve as technology progresses. Via *Netscape 1.1* you can visit pages that play back a sequence of pictures made every few seconds with a video camera.

IT'S GOOD TO TALK (SOME MORE)

Talking to your computer has been something you'd be more likely to see on *Star Trek* than in MACFORMAT... until now. Software programmers have at last learned how to get your Mac confidently understanding what you say to it. The implications for people whose disabilities make it difficult to use a mouse or keyboard are obvious; and the idea is finding favour with multimedia companies. And isn't speaking a more natural way of communicating than typing? The technology is now at the point where it can become an everyday part of using your Mac, and you can expect many programs to offer the facility in 1996.

Apple's own system is PlainTalk, a System Extension that's given away free with the newest PCI PowerMacs and should be a standard part of the OS from now on. Using PlainTalk takes some practice – you have to learn how to speak to your Mac in crisp, even tones – but once you have the knack you can use the combination of a Mac and a PlainTalk Microphone Kit to indulge the fantasy of commanding it to look up a reference in the *Star Trek Omnipedia* (a CD-ROM reviewed in MACFORMAT 31). *Marty and the Trouble with Cheese*, a forthcoming kids' title from Maxis, also uses speech recognition imaginatively. You tell the program your name, which it then uses as it tells the story. You even rescue Marty the Mouse by shouting at a cheeky raven to scare it off.

Other speech systems train the Mac to adjust to your voice, rather than the other way round. MacWorks' *PowerSecretary* is a voice dictation program that works with *WordPerfect*. You can read your correspondence straight into your Mac, speaking only slightly more slowly than you would normally. You need to first create a reference file containing a list of key words, which takes about 45 minutes, but makes life much easier. Apple's *Chinese Dictation Kit* has a longer training period – you speak key phrases for a couple of hours before leaving your Mac to create a reference file attuned to your voice. The meaning of some Mandarin words depends on the tone you use, so this is a vital stage if the program is to understand you. Chinese is a laborious language to input by hand, so this reliable speech system is a godsend.

QuickDraw 3D gives you the flexibility in creating 3D graphics you've been dying for. Look out for top games like *Havoc* (left) and a wealth of serious applications.

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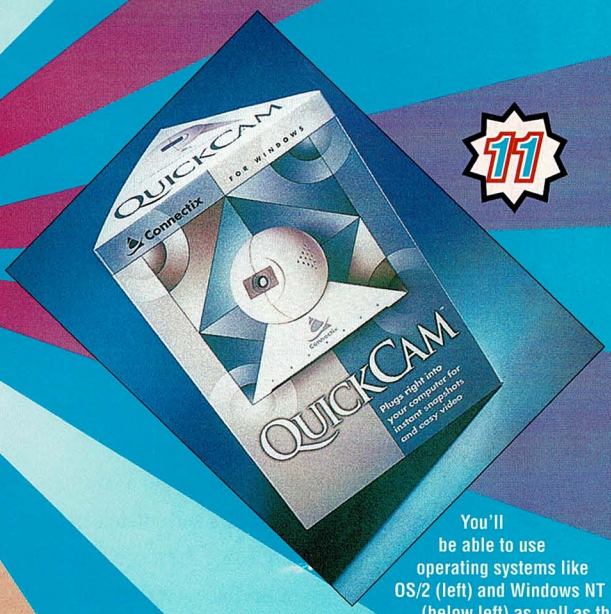

You'll be able to use operating systems like OS/2 (left) and Windows NT (below left) as well as the Mac OS on the new PowerPC Platform.

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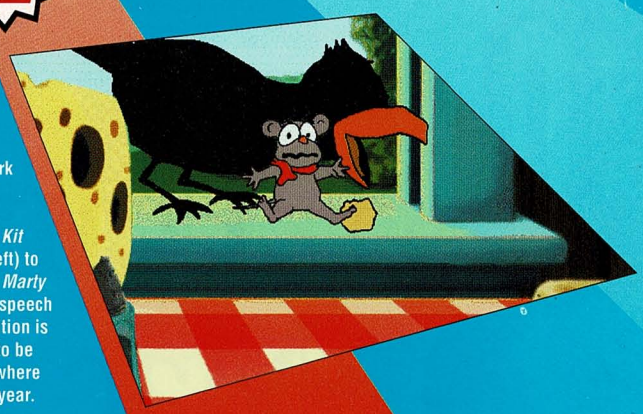
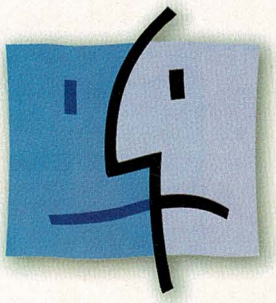


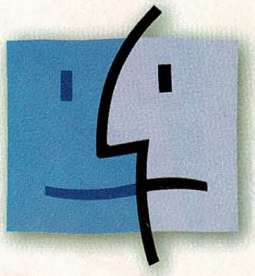
From serious work like the *Chinese Dictation Kit* (above left) to fun with *Marty* (right), speech recognition is going to be everywhere next year.

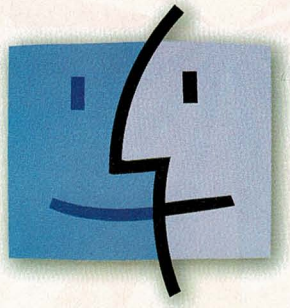
Sad Mac Problem?

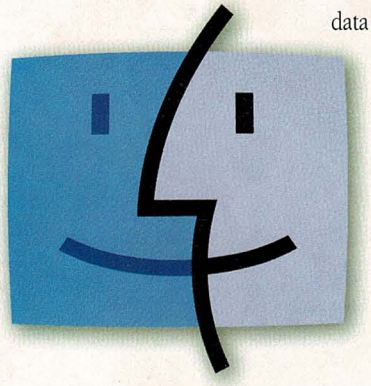
Virex is the first comprehensive solution to the threat of Macintosh computer viruses. Not only does Virex tell you when there is a virus present, it will define and repair all files containing a known virus. It can also detect new or previously unknown viruses. Virex 5 offers the fastest and most secure virus protection available today and you can also take advantage of the Annual Subscription Service to ensure your Mac stays clean and healthy. Macworld Magazine awarded Virex the Editors' choice because Virex is the fastest and most accurate anti-virus software.

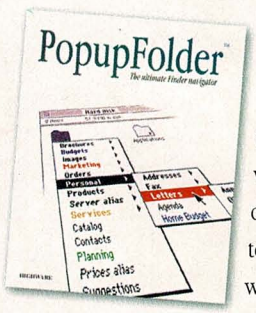
SRP £74.99 with years subscription **£149.00**



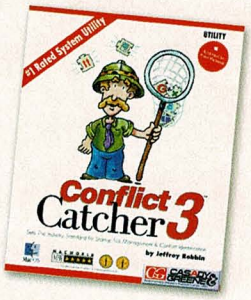




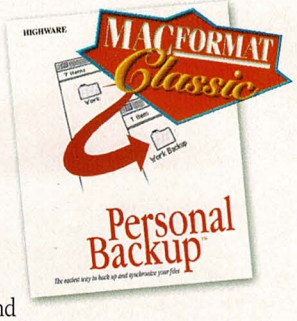




Popup Folder 2 If you're a Mac user then you'll be familiar with double-clicking on folder upon folder to slowly work your way around the Finder. When you click and hold down with Popup installed each folder and drive (even server volumes) sprouts a little pop up menu which shows all the files and sub-folders within it, instantly. Using the menu you can select one of the folders within and see even further—up to 16 levels deep. You can even drag and drop files from and onto these submenus! Popup Folder also adds hierarchical menus to your apple menu and popup access from the open and save dialogue boxes. It's the ultimate finder navigator that no Mac should be without! **SRP £39.00**



Conflict Catcher 3 allows you to locate single and multiple conflicts between start up files through a series of tests. It actually finds problems with your system and does not rely on a limited database that constantly needs updating. Conflict Catcher 3 will log the results of a conflict test to a text file for future examination. It also offers practical management for start up software—extensions, control panels etc.,. It can passively enable and disable start up files without modifying them. Conflict Catcher also includes special tools for PowerBook users including allowing aliases of startup files to be loaded to a startup RAM disc which saves memory and battery life. **SRP £69.00**



Personal Backup eliminates excuses and offers hassle free backup at an extraordinary value. Set up your own Backup routine once from the compact control panel and you'll never have to worry about loss of data after accidental deletions, hard disk failures or other annoying situations. Personal Backup will automatically save your data to any HFS volume such as hard discs, opticals, syquests or even floppy discs. You can create scripts to automate the backup or set it to run at Shut Down or another predefined time. Personal Backup also includes File Synchronisation and a Keystroke Recorder to help safeguard your work.

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SUPERIOR SOFTWARE SOFTline SERVICE AND SUPPORT

Many Mac owners already use the Internet and buy CD-ROMs, but in 1996 these media are set to become an essential part of using a Mac.

Rise of the new media

THE NET TAKES OVER

Multimedia is a combination of text, images, video and sound that the Mac can turn into something that's more than the sum of its parts. After just a few years, multimedia on CD-ROM has become commonplace; now it's the turn of the Internet.

This loose network of computers, exchanging information across the world, is set to continue its rapid growth until it becomes an essential medium to have access to, and in 1996 you'll find information being delivered in ever more imaginative ways.

A new generation of World Wide Web browsers, particularly the pre-eminent *Netscape Navigator*, will be at the core of the multimedia Internet. A Web browser is a program that decodes the information it finds on the World Wide Web and presents it to you in a graphical form.

The next version of *Netscape* is due shortly. Version 2 will use a system of plug-ins – small sub-programs that can be added or removed at will – to handle a wider variety of graphics. So, for example, it will enable you to see Web pages with live animation. Several companies are currently working on new ideas for the Web, many of which will work with *Netscape*.

Adobe's *Acrobat* system is already reasonably common on the Web, in the form of files you can load onto your hard drive to look at later on. *Acrobat* documents are far more sophisticated than normal Web pages, looking more like printed books or magazines. Later in 1996, you'll be able to use *Netscape* and an *Acrobat* plug-in to see these pages live (without having to save them to your drive). There'll also be plug-ins available to support Apple technology such as QuickTime video and the virtual reality system QuickTime VR.

Macromedia's *Director* has become the standard method used for creating multimedia on CD-ROM, but you'll soon be able to make similar material for the Web with the help of a *Director* plug-in for *Netscape*, which will be able to play back small productions made with the original program.

Progressive Networks' *RealAudio 2* is another *Netscape* plug-in – it plays back sound over the Net. With the new version, you'll be able to hear ongoing live broadcasts – and if you have a fast enough connection, you'll get them in FM-quality sound (although not in stereo as yet). It means one person can effectively become the equivalent of a radio broadcaster.

Java is a programming language from Sun Microsystems that you can use to create applets (no relation!) – small programs within a Web page. A *Java* applet can display an animated figure, play sounds, show a clock or even take financial information from the Internet and display it as a chart for you, for example.

And *Virtual Reality Modelling Language (VRML)* is a system from Silicon Graphics which displays 3D images on the Web. You'll be able to travel through 3D worlds on a set of Web pages, so sites such as reference libraries or tourist attractions can give you a deeper sense of 'being there' as you discover the information you're looking for.

Although the software is improving in leaps and bounds, there are still restrictions the Internet must overcome. Apple and other companies are making it cheaper for you to buy a computer that can connect to the Net with projects like Pippin, but establishing a system of cables across the country fast enough to cope with demand will prove more difficult.

One development that will help is a reworking of the HyperText Transport Protocol (HTTP) software used to send Web information from one computer to another. Still in the early testing stage, HTTP-NG (for Next Generation) will be able to cope better with the amount of Web traffic that's out there, and will make sending credit card information safer – both buyer and seller will be able to ensure the other is legitimate. Once the standard has been established, Web browsers can be rewritten to use it.

NEW MEDIA ARMY

The growth of CD-ROM and, in particular, the Internet means there are more opportunities for you to create material that will be seen by thousands or even millions of people. In issue 30 MACFORMAT showed you how to create a Web page, and many of the entrants to our Web publisher competition will soon see their work on FutureNet – look out for details.

Digital publishing is a huge growth area – the European Commission reckon it'll be worth £102 billion by the end of the century. Companies are now vying with each other to become the name you think of when you're deciding which program to get to help you create electronically. After a 1995 poker game of announcements and plans, 1996 is the year when their cards will be well and truly laid on the table.

Web wars

Any successful firm must offer both a good range of software for creating the raw material of text and graphics to use in your multimedia, and the perfect way to assemble them.

Adobe are the most confident contender. With a portfolio of creative programs including *Photoshop* and *Illustrator*, they're now producing titles enabling you to put it all together. The Adobe key is PDF (Portable Document Format), a way of viewing text and graphics that doesn't rely on having fonts installed, but can still give you the richness of detail you'd see in a magazine or on a CD-ROM encyclopaedia. To open PDF files, all you need is the viewing program, which is free.

The *Acrobat* range enables you to convert a document into PDF; from there, you can place it on the Internet or on a CD-ROM. *Acrobat* is now

Continued on next page

included with *PageMaker*, a print publishing program that now crosses the divide and enables you to publish electronically as well.

Also from Adobe comes *PageMill*, a program you can use to make simple HTML pages – simply. Using HTML has been something of a chore up until now, as our brave competition entrants have no doubt discovered. With *PageMill*, however, you are able to write a Web page as easily and quickly as you would create a word processing document.

Director forms the core of Macromedia's assault on new media. It's already widely used to create richly detailed interactive media to place on CD-ROM, but the firm are also busy setting up ways to enable you to place *Director* movies on the Net.

Photoshop rivals

Macromedia are also filling out their range of software for creating original material. *FreeHand* has developed from a drawing program into something that handles text desktop-publisher-style. Macromedia's disparate 3D programs are being merged into *Extreme 3D*, a modelling and rendering package. And after their buy-up of Fauve Software recently, you can expect a revamp of *xRes*, turning it into a genuine *Photoshop* rival.

Make that **another** *Photoshop* rival. From the stable of *QuarkXPress* comes *QuarkXPosure*, an exciting-looking image editor that saves the instructions to make the changes to an image, rather than the image itself. This means you can go back and change something you did half an hour ago without altering everything you've done since.

Quark are also busily preparing *QuarkImmedia*, a multimedia creation system that follows the same free viewing program model as Adobe's *Acrobat* and other similar products. You create your production with *QuarkXPress* working in tandem with *Immedia*, so essentially the former is getting the ability to make video boxes the same way it can now do text and picture boxes.

15 SuperDisc

The successor to CD-ROM is on its way. Digital Video Discs from firms including Sony and Toshiba will be able to store more than seven times the information CD-ROM can manage – which means you'll be able to buy discs of feature films or music albums. And the Mac will be able to play huge multimedia and game programs with superb quality video. You can expect to see films to watch on your telly, music for your hi-fi and multimedia for your Mac – all on one disc.

Apple showed a Toshiba prototype working with a PowerMac at the recent Comdex show in Las Vegas, but the DVD drives are unlikely to appear until late 1996.

16 Lines of communication

The main hurdle still hindering the growth of the Internet is the technology that made it open to so many people in the first place. You can use a modem to connect to the Net through the existing phone line system, which is fine for sending electronic mail, but the system isn't powerful enough to cope with the increasingly rich graphics and animation on the World Wide Web.

Solutions to the problem are being worked on, but the most likely next step for many is ISDN. Integrated Services Digital Network signals can be sent along existing phone lines, but can be transmitted up to ten times faster than the fastest modem can manage. You need to install an ISDN card into your Mac to send and receive signals.

The technology itself is comparatively cheap, and repays its cost with cheaper phone bills – but both BT and Mercury charge hundreds of pounds to install a line. A second limitation is that if you make a call with ISDN, the recipient must also be using it. According to Jason Taylor at 4-Sight (one of the main sources for ISDN computer cards in Britain) this means that the use of the system is limited to the professional community. 4-Sight themselves deal almost exclusively with the publishing market, where it's essential that material can be sent long-distance as quickly as possible.

Closely guarded

As Taylor admits, 'ISDN has to become affordable to be used on the Internet... and BT can only do things if Oftel let them.' Oftel is the BT watchdog, responsible for making sure they don't have an unfair advantage in the marketplace. But now that cable companies are springing up offering fast phone lines, Oftel should be free to loosen BT's chains, letting the price of ISDN installation fall.

BT are also working on a way round ISDN's other drawback, with a dual-channel socket automatically switching incoming calls through either ISDN or a regular line, depending on its source. With Internet providers like Demon now accepting customers who want to connect through ISDN and not overcharging them for the privilege, the path to a faster and cheaper future is opening. 4-Sight are watching developments with interest, and stand ready to offer lower-cost ISDN cards with a more basic set of functions ideal for simple Net use. 'We've got a lot of ideas,' says Jason Taylor.

17 It's a bit of an animal

You might have noticed this if you've used the Internet, but it's not the easiest thing in the world to grasp. It's as if the clock has been turned back to before the days of user-friendly computing – you're expected to cope with understanding different systems like the World Wide Web, Gopher and (gulp) File Transfer Protocol.

Apple's *CyberDog* software makes those differences virtually invisible, enabling you to concentrate on finding and using information on the Net. It uses Apple's OpenDoc system, which opens up new possibilities of using the Internet within other programs. Imagine producing a report on a word processor. You use *CyberDog* to fetch some statistics from the Net and drop them onto your page, then the figures are updated whenever they change on the source Internet site. It's as easy as cutting and pasting a picture in.

Apple's Gina Centoni says users will see the Internet in a new light after using the program. 'Our goal with *CyberDog* is not to make them realise they're on the Internet. They're just going somewhere that happens to have some information they need.'

It's not been decided quite how or when you'll be able to get hold of *CyberDog*, or indeed what it will be called when it appears. Legal considerations may prevent Apple from calling it *CyberDog*. But whatever it's called, it's clearly an ambassador for the OpenDoc concept of working with small component programs. Centoni says, 'People see that and immediately understand what components are all about. They just go... "Oh, I get it."'

The World Wide Web becomes a true multimedia experience next year, with do-it-yourself live programs with *Java* (below left) and 3D worlds you can explore with Silicon Graphics' *WebSpace* (right).

Netscape: Java Applets
JAVA APPLETS
Netscape Navigator 2.0 supports Sun's Java, a new programming language based on C++ and designed for secure two-way, real-time interaction. Using Java, developers can write custom mini-applications called Java applets which integrated into Web pages, Java applets allow expert graphics rendering, real-time interaction with users, live information updating, and instant interwork with servers over the network. Java applets are downloadable from any server and run safely on any platform. Java is designed to provide maximum security on public networks, with multiple safeguards against viruses, tampering, and other threats.
Using Java, developers can write custom mini-applications called Java applets which will provide Internet sites with a huge range of new functionality, animation, live updating, two-way interaction, and more. Java applets allow cross-platform programmability and can be embedded right into HTML pages.
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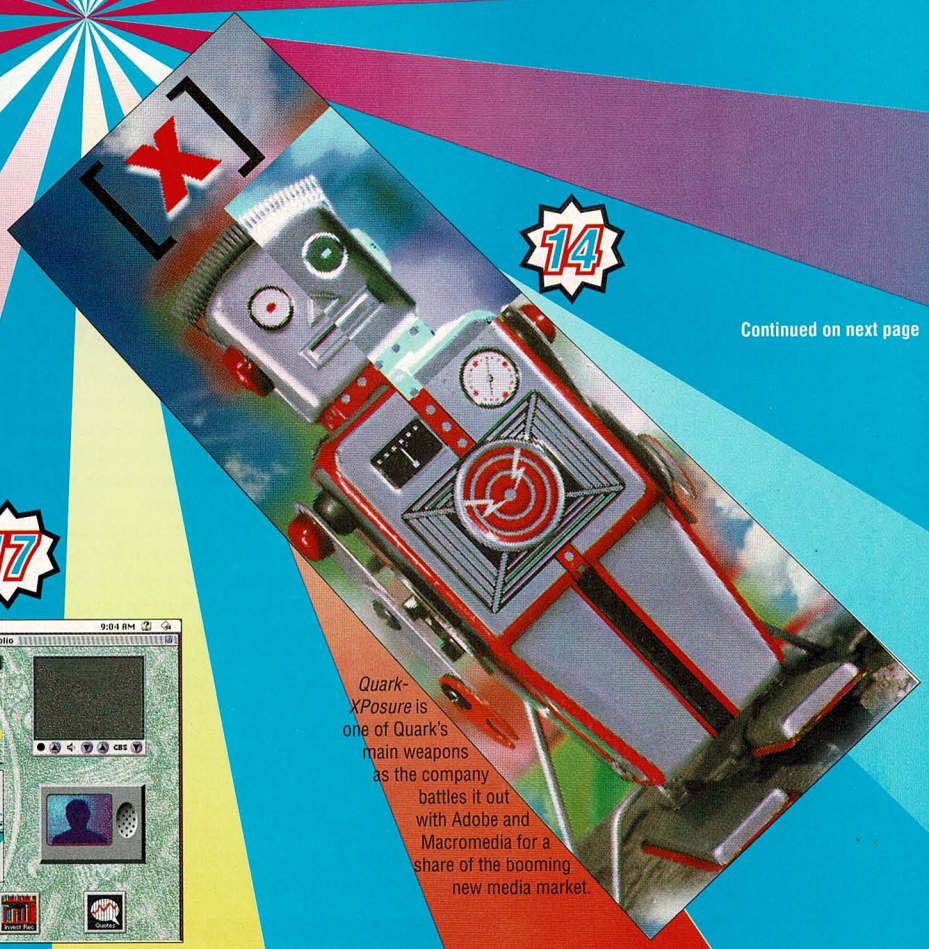
13

WebSpace: Lightscape Visualization System - Half Needed (Walk Viewer)
File View Go Bookmarks Viewpoints Options Help
Location: https://bruin.esd.sgi.com/sambo/VRML/radiosityhalf.wrl
Entry View
SiliconGraphics



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Quark-XPosure is one of Quark's main weapons as the company battles it out with Adobe and Macromedia for a share of the booming new media market.

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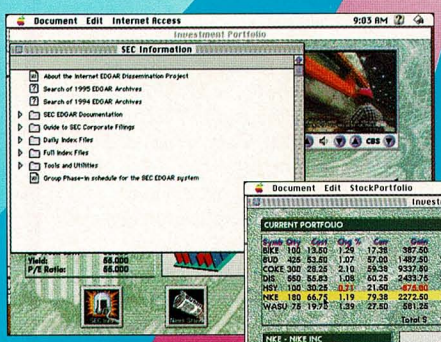
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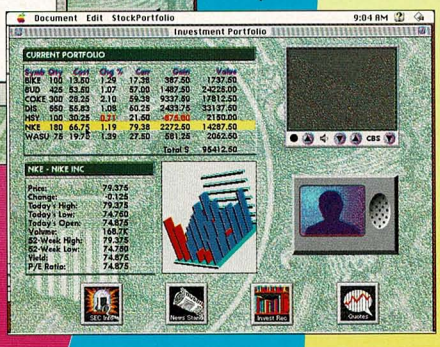
Daily Index Files
Full Index Files
Tools and Utilities
Group Phase-in schedule for the SEC EDGAR system



The program codenamed *CyberDog* should surface early next year, showing you the true potential of OpenDoc technology.

Even the fundamental ways in which we use a computer are under challenge. 1996 is the year the rules start to be rewritten.

A new horizon

18 AMAZON!

An interface is the link between the computer and you. It's what you see on the screen – the elements of icons, menus and windows that combine to enable you to use software.

The idea of the Graphical User Interface (as it's come to be known) originally emerged at Xerox Park, where research to find easier ways to use computers led to the formation of the concepts used in most software today. The GUI is the accepted convention worldwide, but no system can long suppress the maverick spirit.

Kai Krause heads up MetaTools (the company formerly known as HSC). You've seen his idiosyncratic interfaces in software like *Convolver* and *KPT Power Tools 3* (reviewed on page 88). Krause often designs programs that ignore the traditional interface model to a great extent, but he says there's a strong reason to do so: 'Many of the things I do now – the lenses that are moving around – I'm trying to provide a new solution. Oftentimes I get this discussion about it being non-standard – and people use that word "standard" as if it was a good thing.

'They're trying to imply that if you don't have to relearn certain things 'cause they're standard, that's good. But in reality they're always harking back to previous knowledge you supposedly already have, and you put a huge lid on innovation.'

Krause recalls the years Xerox spent on interface research: 'There was a time when people were thinking – regardless of what the current state was – purely about the problem itself. And they went from green characters on dot matrix lines to invent the folders, the icons, the mouse – all these came from an approach of, "What if we could start totally from scratch – how would we solve this problem?"

'All I'm saying is that it's worth wiping it all away and saying, 'look at this new machine. Given a megabyte of RAM, or four or sixteen, and a gigabyte [1,000Mb] of hard disk, how would you now look at the problem of word processors, spreadsheets, or more abstractly, the problem of getting data across.'

MetaTools' work over the last few years has finally come to a head in a project called *Amazon*. Krause has a frustrating time trying to define exactly what *Amazon* is, though. 'It isn't a product; it's not like you go from *Power Tools* to *Convolver*, and then to *Amazon*. It's underlying technology; it's a concept of interfaces. It's really an approach to something. Added to that is lots of code. There's two years of code there. But it's not as simple as shrink-wrapping it and putting out *Amazon 1.0*.

'You look at the Top Ten list of programs and you have *Word* and *Excel*, *PageMaker*, whatever else. If you think about it, they were all designed years ago on a 128K machine, then a 256 and a 512. They all went 1.0-2.0-3.0-4.0, and what you've got there is a structure that is really overtired. They've got this tricycle with a Ferrari shell around it. Somewhere they're going to have to stop that and start from scratch.'

Krause believes that the incremental approach he's described has stifled the primitive gee-whizz enthusiasm that comes from simply playing with a computer. 'That's the thing I really want most from *Amazon*. You get this new software and you install it: then you sit there at two o'clock in the morning, and you look at the screen and you go, "What the f— *is* that? How'd I do that?"'

19 OPENDOC: IT JUST WON'T QUIT

Apple may not be looking to start the Mac OS from scratch Kai Krause style, but they still have some pretty radical ideas, which will fundamentally change the way you use your Mac – if they catch on.

OpenDoc is a system that takes the basics of using software and turns them on their heads. Underlying every computer is the basic idea that you load a program, then open up a document to work on within the program. You can often move the document to within another program if you decide you want to perform a different set of tasks.

Not with OpenDoc. Here, you actually start with a blank sheet on your screen – your working document. Then you take small programs, called parts or components, and drop them into your document as you require them. The closest existing parallel is the way different parts of *ClarisWorks* work together, with different tools appearing as you do different functions.

Among other things, this means you no longer have to Quit out of a program: you close a document instead. You can have several drafts of the same document as your work progresses, passing a draft to colleagues for suggestions before doing a next draft. It's a concept that is familiar to many people in publishing.

The reason behind this dramatic switch is simple, as the OpenDoc team's Gina Centoni explains: 'Today the user knows too much about technology, as far as we're concerned. They know too much about their applications because they struggle with them. They have to spend an enormous amount of time just learning how to use their word processor. We don't think that's an effective way for a user to use a computer.'

Centoni believes today's programs have become too big and complex for their own good. 'They're too difficult, there's too much there and the user spends too much time trying to manipulate these applications instead of trying to get the work done.'

OpenDoc means that you can have a word processing part in one area of your document and a drawing part in another – but the commands for either of these areas only appear when you're actually ready. Click on the word processor area you've

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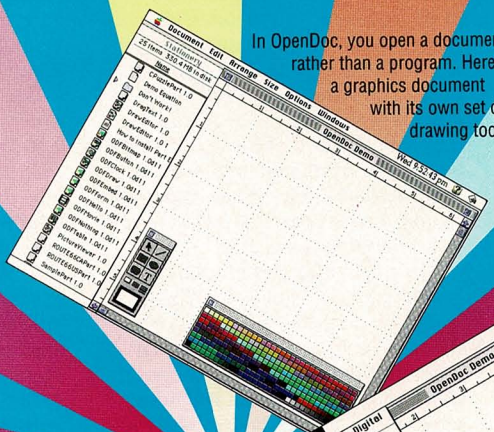
Parts of *Kai's Power Tools* do away with the normal Mac interface, like this lens you can use to preview effects. Look out for more of the same in *Amazon*.

In OpenDoc, you open a document rather than a program. Here's a graphics document with its own set of drawing tools.



You can then drag in a clock document from the window on the left of the screen. When you click on the clock face, its particular set of controls appear in the menu.

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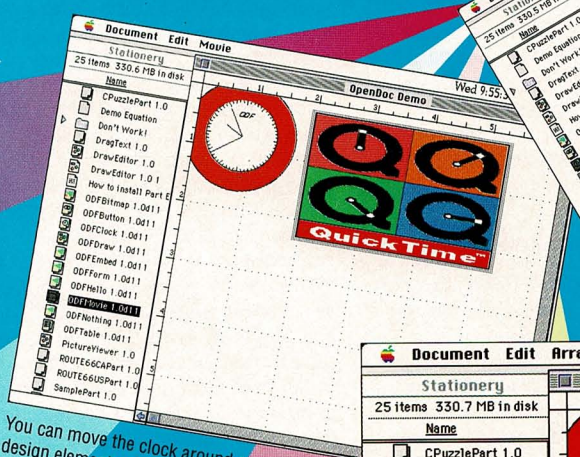
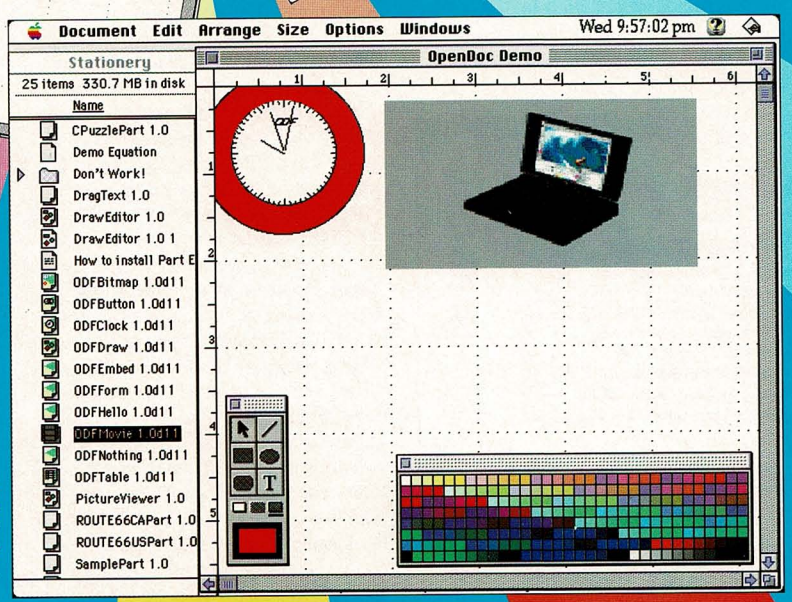


You can move the clock around and give it a design element using the drawing tools. Then drop in a QuickTime video document.



Start a video running in the QuickTime area and you've got a multimedia document with just the features you needed in minutes (hope you kept an eye on the clock!).

Continued from page 50

created, and the menu switches to include the commands you require.

This doesn't have to place huge demands on your Mac; it's more a different way of thinking. Apple reckon you'll need 8Mb of memory and the System will work on 68K Macs as well as PowerMacs.

The OpenDoc software is finished, but you won't be hearing a great deal more about it for a few months. It's now up to companies and programmers to decide what they want to do with it. Expect to see sets of OpenDoc parts from Claris, Adobe and of course Apple before the end of 1996; but OpenDoc's impact will really be felt over the long term.

The software you need to run OpenDoc parts is already available on the World Wide Web; it will be provided with OpenDoc parts when you buy them and with new Macs as they're launched during the year; eventually, it will be part of Copland.

1996 will see Apple trying to show you what you can achieve with OpenDoc, says Centoni. 'We're looking at doing a base of parts that would go on the machine, much like *MacWrite* and *MacPaint* way back when, to introduce the user to the components. We think we need to provide some sort of education for users as to what OpenDoc is, to get their feet wet.

'You will just start to scratch the surface of OpenDoc in '96, because the proposition we're making is radically different from anything we've done before.'

FANFARE FOR THE COMING MAC

This is where it all comes together. Copland is the codename of the next version of the Mac OS. The rewrite, which is the most extensive in Apple's history, is named after the composer Aaron Copland. The Copland analogy is entirely appropriate, because the OS will work with disparate parts, encouraging and cajoling them until they perform together as one.

In common with many of the other elements we've been talking about in this feature, Copland will only work on the PowerMac – but Apple will have stopped making the 68K Mac months before Copland appears. And there's no reason why some parts of Copland, particularly the more cosmetic changes, couldn't be added to System 7.5 on a Mac.

With Copland, you'll be able to use more than one program at once – and that's not just a case of being able to switch between the few you have loaded into your memory. Your Mac will actually be able to do several things at once; so, for example, you can start copying a file from one disk to another, then move into a word processor and type away while your Mac carries on copying.

This ability to multitask, as it's known, is tied in with a reworking of the deepest levels of the Mac OS, which should mean that even the most unreliable system crashes less often. Apple are building in protection so that even if one program does crash, the work you're doing elsewhere will be safe and sound.

The entire system is being broken up into different layers, each of which has a different job to do. The plan is that later versions of the Mac OS will be completely divided into clear sections, so that Apple will be able simply to take out one part and slot in a new one when it's ready.

Apple are using this plug-in approach to Copland to develop the ideas we've mentioned earlier; that the OS should be adaptable so that different computers can use it for different purposes, and that it should offer you help, even taking over routine tasks completely.

AppleScript (see page 79) is included and enhanced so that you can set your Mac routine tasks to take care of, like making a backup of your hard drive every Friday at 7pm or checking for e-mail every two hours. It will work in conjunction with an improved AppleGuide, the system that shows you how to do things.

Mac makeover

The design of Copland treats each part of the Operating System as a plug-in component that you can change, switching between different settings. You can set up your program icons so you only need to click on them once (it looks similar to the Launcher icon used in *At Ease)*, or so that you click twice, as you do now. You can hide potentially data-threatening menu commands like **Empty Wastebasket**, while the **Open** and **Save** dialogue boxes come in two designs you can switch between at will. Your Mac remembers every change you've made.

What this enables Copland to do is offer a selection of ready-made alternative setups for your Mac. These are designed for Mac owners with different levels of expertise.

Added to this are several types of icon, window and Desktop pattern, which you can combine to customise the look of your Mac. It means you can have a look and set of commands specially made for you. And because it's all based on such a simple structure, companies will be able to offer setting-and-design combinations in addition to those Apple provide.

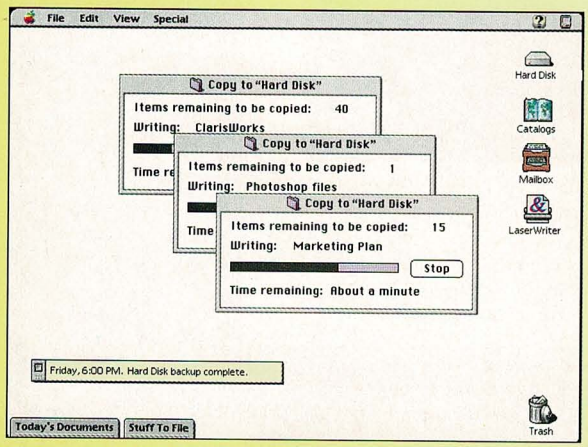
Apple are convinced that all this power won't require you to spend an arm and a leg buying new memory for your PowerMac. They claim you'll be able to run your programs with Copland in 8Mb – despite the fact you can't do anything too significant with less than 16Mb nowadays.

This heady aim will be achieved with virtual memory, the system already used by Apple's Modern Memory Manager Control Panel and with rather more success by Connectix with their *RAM Doubler* software. Usually, your memory and your hard disk serve two distinct functions – your hard disk is a storage area you draw programs and documents from, which you place in your memory so you can work with them. Both these systems turn part of your Mac's hard drive into make-believe memory, shuffling the parts you are actually using into memory as you need them. The technique is slower and less reliable than installing extra memory chips, but it's an awful lot cheaper too.

Copland will take advantage of the PowerMacs' huge hard drives (500Mb and upwards) to dramatically improve the Mac's built-in virtual memory. Up to 30Mb of your hard drive will need to be set aside to help you juggle programs in comparatively little memory, although Copland will still work faster if you have the extra memory installed in your Mac.

There's some doubt both within and outside Apple that Copland will be finished in 1996, although, while speaking recently at London's Apple Expo, Apple Vice President David Nagel maintained they were still on course for a '96 release. But whatever happens, the project will be impossible to ignore in the next 12 months, and will affect every other product release.

Copland won't be known by that name when it becomes available. You can think of it as System 8, although it's possible that Apple will start over, with the release of Mac OS 1.0 signifying the new era. **MF**



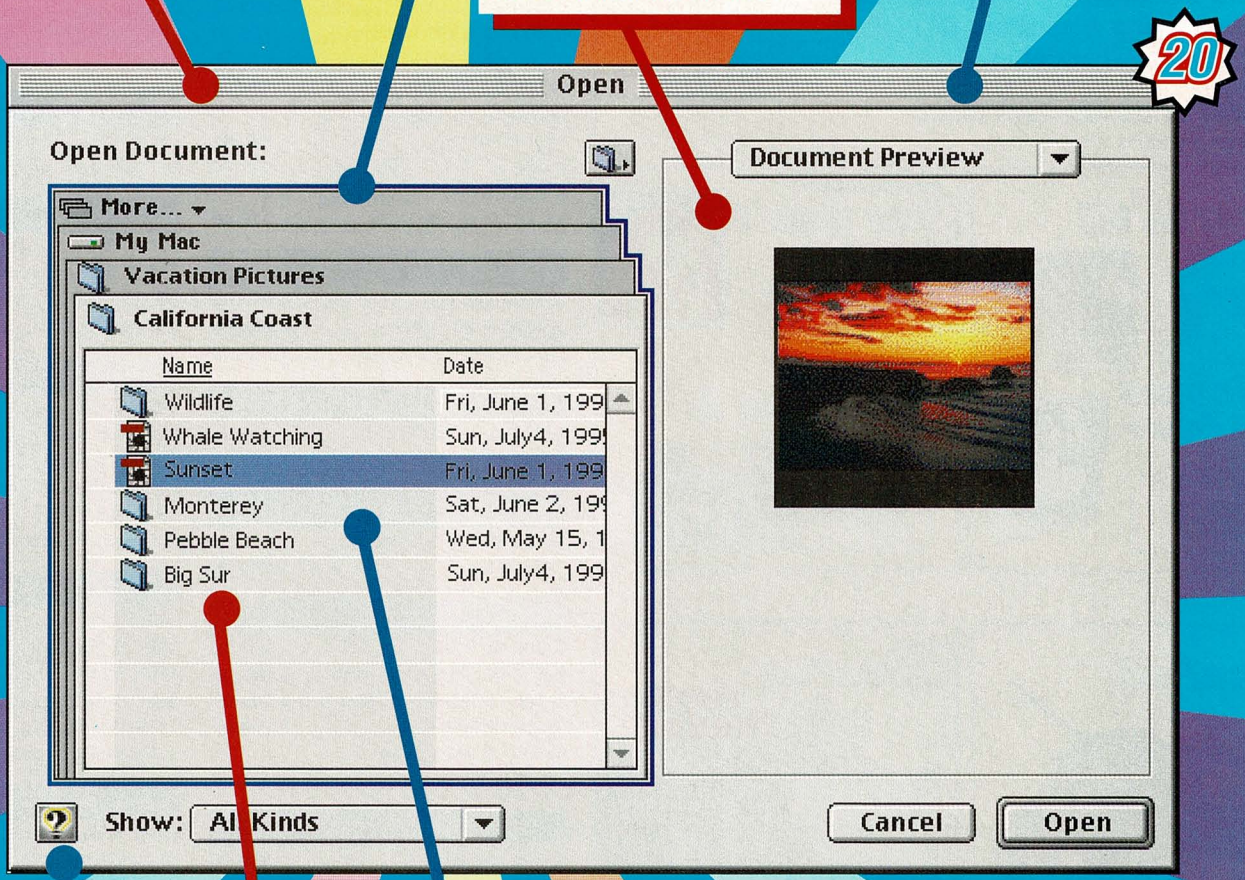
Copland's ability to multitask means you'll be able to do several things at once, like copying different files to different folders without having to wait.

This layered effect gives you a much clearer idea of what folder you're within and where you've come from.

You can grab hold of the banner and move the window to a more convenient position. You'll also be able to click on another window or program and use that without having to **Cancel** out of the **Open** box.

A banner running across the top can be used to remind you what this box is designed to do. Programmers can place more extensive instructions here if they wish.

In this example a lot of space is given to a preview of the picture file, but more typically you'll get a wider list of files, which will include each one's name, date and size.



If you're a new user and are plain confused by the controls here, AppleGuide instructions are available at the touch of a button.

You can sort this list according to name, date or size, in the same way as you'd sort a window in the Finder.

A compressed font will be used if a file name is too long to fit into the space that's available.

Apple's customer helpline reckon that questions on how to use the **Open** and **Save** dialogue boxes are among the most common types of call they get. The redesigned box for Copland indicates Apple's intention to look carefully at each part of the Mac interface, and assess how to make it easier to use and present information more clearly.

If you're new to the Mac, or just uncomfortable with the number of things you have to do to open a file, you can choose to use a simpler **Open** box that asks you for the name of the file and does the rest for you.

The **Find File** function will also be more powerful. Once you've done a search for a type of file, you'll be able to save the list of results in a folder on your hard drive and come back to it later. The list changes over time as you add and delete files that are of the type you were searching for. And because the list is saved, you can see it with the **Open** or **Save** box.

The eventual aim, which may not happen with Copland, is to make **Find File**, **Open** and **Save** boxes and the Desktop work seamlessly together. So you could open the **Save** dialogue box, select the name of a file and drag it to the folder on your Desktop where you want it to go.

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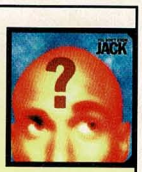

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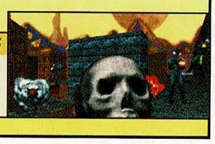
Marathon 2



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Other configurations of Apple computer systems are available – call for pricing.

All products and prices subject to availability. All prices exclude carriage (£5 per order) and VAT

All prices quoted are on the basis of payment with order. The Mac Zone accepts Visa, Access, American Express, MasterCard, Connect and Switch as well as cash, postal orders and cheques, however cleared funds are required before the goods are shipped.

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These accelerators are available for most Macs from £99.95. Please call for details.

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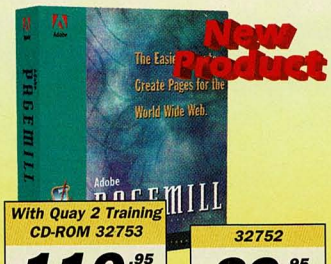

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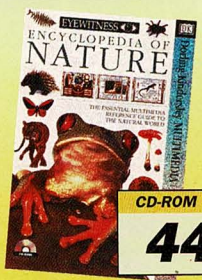

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Hey, Baby

We asked three housewives...

Buying a Mac can be a confusing process, especially if you're working to a budget. Lindsay Bruce asks: which Mac is right for you, and what does it *really* cost?

Buying a Mac is easy, but buying the right Mac at the right price – that's the trick. Quite apart from all the models available, prices vary wildly from one dealer to another, and each seem to have their own special bundles. How on earth do you decide which Mac is right for you?

Golden rules

What do you want to do on your new Mac now, and what do you think you'll want to do on your Mac in a year's time?
Getting the right answers to these questions before you buy will save you much soul searching and wallet fatigue later on. Many people buy a cheap low-end Mac for a bit of letter writing and playing a few card games, only to be disappointed when, a year later, they find out that it won't do 3D rendering or image retouching. Ask yourself what things interest you. Do you like drawing or painting? If so, you might want to try out some Mac-based paint programs. Do you have a video camera at home? If so, you might want to dabble in some home video editing. Never buy a Mac for what you want to do today; buy it for what you realistically might want to do in the future.

At the other end of the scale there is the techno freak – the sort of person who just has to have the latest, most powerful model. Never buy a Mac solely because it's the most powerful or latest machine. The high-end Macs tend to be where Apple's profit margin is, so unless you really need every ounce of power that these machines can provide, go for something with a lower spec.

Macs never come with enough memory (RAM).
It's a sad fact of life that if you want to do anything more than run a simple word processor on your Mac, then you'll need more memory than is supplied with the computer when you buy it. System 7.5 on non-PCI Macs (that is, all Macs bar the very latest PowerMac range) takes up a minimum of 3Mb of RAM. System 7.5.2, which runs on PCI-based PowerMacs only (the 7200, 7500, 8500 and 9500), takes up a whopping 6Mb. Start adding extras like QuickTime, networking, QuickDraw GX, PlainTalk and QuickDraw 3D, and your precious RAM will dwindle to the point where you can't even open SimpleText. The paltry 8Mb of RAM you get with the majority of Macs won't even let you run most new games.

Realistically speaking, you can get by with 8Mb of RAM on the Performa 630 (which is the only non-PowerMac you can still buy new), but if you get a PowerMac, you'll need 12Mb of RAM.

Most Macs don't come with a monitor or keyboard – you need to buy these separately.
Only the all-in-one Performas (5200 and 5300) come with a monitor and keyboard; with any other Mac you have to buy them separately. Which monitor you go for is up to you and your budget, but given that you will probably spend long hours staring at it, it's worth getting a decent one.

These days monitors come in lots of different sizes with corresponding price tags – your basic model is of the 13 inch, 640 x 480 pixel, colour variety. Try to go for the Trinitron tube types, which offer sharper, clearer images. Multiple scan monitors are capable of displaying more than one resolution (640 x 480, 832 x 624 or higher, depending on the monitor), but these come in at a steeper price.

Keyboards are more of a personal thing – most people get by with just the standard no-frills Apple keyboard, but many DTPers and art experts swear by their extended keyboards, which offer plenty of function keys. Function keys give you more key command options, which can sometimes be faster than using your mouse.

Prices in adverts rarely include VAT or delivery.
Because the majority of Macs are sold to business users, mail order advertisers rarely include VAT or delivery in their advertised prices. While they are required to say if they don't, this is usually buried in the fine print of the

Continued on next page

DOING IT ON THE CHEAP

If all this sounds too great a drain on your wallet, there are cheaper alternatives:

1. Second-hand hardware
Buying a second-hand Mac can save you stacks of cash. MACFORMAT's reader ads (page 129 this issue) are stuffed with reasonable offers, and some of the national newspapers have Macs for sale in their classified sections.

Unfortunately, second-hand hardware doesn't come with any guarantee that it will still work when you get it home. Make sure everything works before you pay for anything – insist on trying it out. If possible, get the System disks and manuals and ask if it's still under warranty – you may be able to get it transferred to your name.

Alternatively, ring round the big mail order companies and ask if they have any warehouse-soiled stock – Macs that work, but have damaged packaging. These may come with a limited warranty from the retailer.

2. Shareware, freeware and public domain software
Not everyone can afford to buy off-the-shelf commercial software, and sometimes they have particular requirements from their software, so some people write their own and distribute it for a nominal charge. Some of the best software on the Mac has been written by home programmers or Mac enthusiasts. Getting hold of it is easy: MACFORMAT's Cover CD is packed with shareware and freeware every issue. If you're looking for something more obscure, try searching it out yourself with a modem and Internet connection.

SHOPPING AROUND

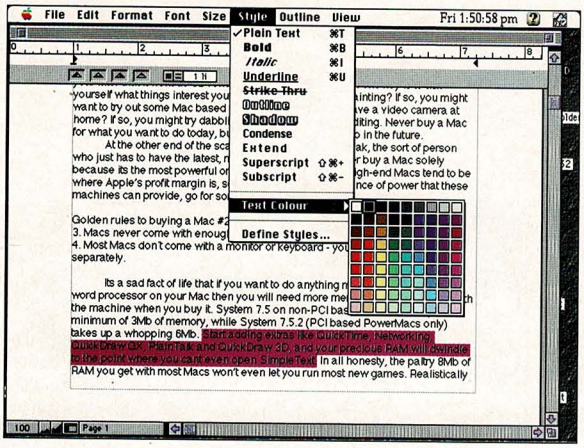
Apple do not fix the selling price of their products, so there's strong competition between Mac dealers. If you find a good deal, make a few phone calls to see if another dealer will match or beat the price. If you're buying a lot of stuff from the same dealer, try to get a discount – the worst they can say is no.

SPARE DOSH

If you have a few extra quid to spare, try getting hold of an AV Mac. This will enable you to record 16-bit video and sound. The AV Macs are the Centris/Quadra 660AV and 840AV, and the PowerMac 6100AV, 7100AV, 8100AV, and 8500 (using an optional expansion card). The Performa 630, 5200, 5300, and 6200 also have optional AV technologies.

HARD OF HEARING

Your Mac comes with a built-in speaker, but it's not wonderful. All Macs now come with a headphone/speaker output socket, so if you want to play audio CDs on your Mac or do serious multimedia work, you can hook up an amplifier and external speakers.



Most Macs these days come with bundled software of one form or another. *ClarisWorks*, the best selling business package for the Mac, is one of the most popular software bundles – although you're unlikely to get the latest version.

ad somewhere, and it's easy to forget to add VAT to everything.

Bundled software is a sweetener, not a reason for buying a Mac. Macs are often sold with a range of third party software already installed to get you started. This is not a reason for buying a particular model. Settle on the Mac model you want first, then shop around for the best deals and bundles. The software that comes pre-installed in the bundle is seldom the latest version, either.

Shop assistants are not technical support people. In the last year or so, Apple have made a huge effort to get as many high street retailers selling Macs as possible. In accordance with this, they are also running training programs for shop staff, to teach them the Mac basics and questions that potential buyers are likely to ask.

This does not make them Mac experts; they won't be able to tell you what to do if things go wrong. Generally, high street shops sell Macs to first-time computer buyers who are more in need of buying advice than technical support. However, if you go to an Apple Authorised dealer who sells computers only, then the staff should be better equipped to deal with any technical questions you may have.

Mail order companies can't advise on the best system for your needs. If you already have a bit of Mac savvy and know what model you want, then your best bet may well be a mail order company. But if you're unsure, they may not be best suited to advise you at a distance on what model of Mac to buy or what software to go with it. They may not offer technical support like a local dealer either. The big reason to buy mail order is money. A mail order Mac setup is likely to cost you substantially less than buying from a high street chain.

Getting the right system

When you buy a Mac, you also need to get hold of monitor, keyboard, printer, CD-ROM drive and software, before you can do anything productive with it. A printer isn't essential to get your Mac up and running, but you will need one if you want to do any letter writing or publish that novel you've always wanted to write. You don't *have* to get a CD-ROM drive either, but so much stuff comes on CD-ROM these days that you'd be daft not to get one, especially at today's bargain prices. Unless you find the Jigsaw Puzzle particularly entertaining, you'll need some software as well – but that depends both on your budget and on your particular needs, and we'll leave that for another time...

PCI

The latest range of PowerMacs (the 7200, 7500, 8500 and 9500) have PCI slots instead of NuBus slots. Like the NuBus slots, they enable you to add specialist cards to expand your Mac's capabilities. PCI cards are faster and cheaper than NuBus. Unfortunately, PCI and NuBus are not compatible with each other. For the full picture, see issue 32's feature on the new PowerMacs. If you missed it, order a copy on page 117.

CLONES

While you're hunting for your dream Mac, take at look at the Mac compatibles (or 'clones') from Radius and Power Computing. Both manufacturers produce 100% Mac compatible machines which you may find you can pick up much cheaper than an Apple Mac. Look out for our clone road-test and review soon.

A QUESTION OF BALANCE

Your exact setup depends on what you plan to do with your new Mac. Buying a complete system is a balancing act – there is a trade-off between the components of your system. Do you go for a powerful Mac with less memory and a small monitor, or do you go for a cheaper Mac with more memory and a better printer? For home use, the Performa series is ideal, and the break-down we provide on the next page is a good guide. But what if you have different needs?

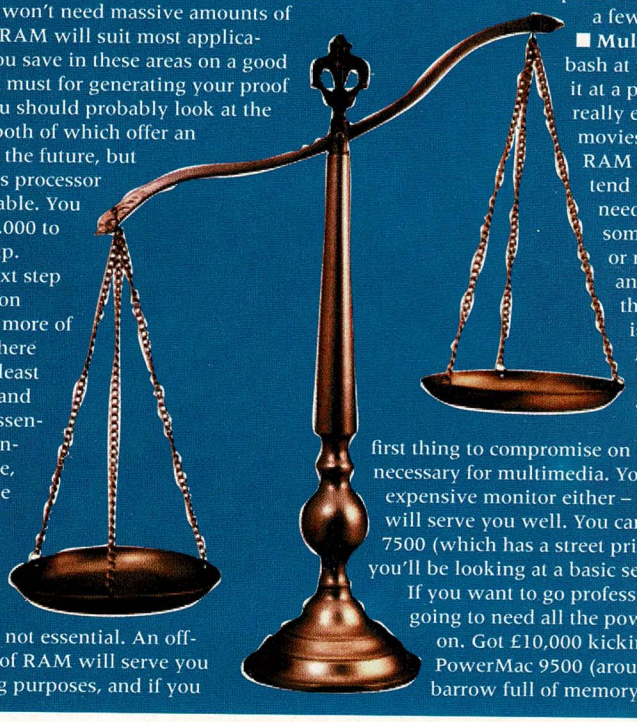
■ **Desktop publishing and illustration.** In comparison with graphics work, you don't need that much power to run a DTP program (such as *QuarkXPress*), or a drawing program (such as *FreeHand*). Unless you're going to be producing high-end colour output, you can get by on a standard 13-inch monitor as well. You won't need massive amounts of memory either – 12Mb of RAM will suit most applications. Spend the money you save in these areas on a good PostScript laser printer – a must for generating your proof pages and final output. You should probably look at the PowerMac 7200 or 7500, both of which offer an excellent upgrade path for the future, but the 7500 has the edge as its processor daughterboard is upgradeable. You should expect to spend £3,000 to £3,500 on your whole setup.

■ **Graphics.** This is the next step up the rung from illustration work, and requires a little more of everything. The priorities here are a good monitor and at least 20Mb of RAM. A scanner and appropriate software are essential too. *Photoshop* is the standard image editing package, but costs £738. *Color It!* (free on issue 31's Cover CD) makes an excellent budget alternative. You can spruce it up with third party plug-ins, too.

A fast Mac is handy, but not essential. An off-the-shelf 7500 with 24Mb of RAM will serve you well for most image editing purposes, and if you shop around you should get a basic setup for £3,500.

You can do 3D modelling on nearly any Mac, but professional level modelling demands serious power. For a professional setup, look at the higher end Macs such as the 8500 (around £3,900), and, ideally, you want a whopping 40Mb of RAM or more. Higher end graphics come with a higher price tag – a professional system will set you back a somewhat frightening £8,000.

Finally, graphics files tend to take up lots of disk space, so a removable drive such as the Iomega Zip Drive (which scored 91% in MACFORMAT 29) is a good buy at under £200. Unfortunately, there's a queue for the Zip Drive, so be prepared to put in your order and wait a few months.



■ **Multimedia.** Anyone can have a bash at this on their Mac, but to do it at a professional level requires really expensive kit. QuickTime movies and sound files like lots of RAM and disk space. If you intend to record from video, you'll need a digitising board and some serious disk space – 2Gb or more. If you're generating animation on the Mac itself, then disk space is less of an issue, but the power of your Mac is a vital factor – especially if you plan to do any 3D animation.

If your budget is tight, the first thing to compromise on is the printer, which isn't necessary for multimedia. You probably won't need an expensive monitor either – a basic 17-inch multiscan will serve you well. You can create multimedia on a 7500 (which has a street price of around £1,850), so you'll be looking at a basic setup in the region of £4,000.

If you want to go professional, however, you're going to need all the power you can lay your hands on. Got £10,000 kicking about? Invest in a PowerMac 9500 (around £5,200) and a wheelbarrow full of memory, and you're away.

The two grand Mac challenge

We expertly put all this kit together to give an artist's impression of what it looks like as a package. Buying a complete Apple Mac system needn't cost you an arm and a leg, and using our handy tips, you can save yourself a lot of cash.

You're looking for a Mac for home use. You only want to use a word processor and play the odd game, but you might want to branch out in the future. You're not rolling in money, so you've set yourself a limit of £2,000, which sounds like a lot, but you've got to get a complete setup for that – Mac, monitor, keyboard, printer, the lot. We hunted through current adverts for the best deals we could find (VAT included):

■ **A Performa 6200 with internal CD-ROM drive, 8Mb of RAM, a 500Mb hard disk and *ClarisWorks 3.0*, for £939.**
This is a good all-rounder that will handle most applications and games you care to throw at it. The Performa 6200 is the entry level PowerPC-based Mac. It sports a 75MHz PowerPC 603e chip, and comes with a quad-speed CD-ROM drive, a 500Mb internal hard disk and 8Mb of RAM.

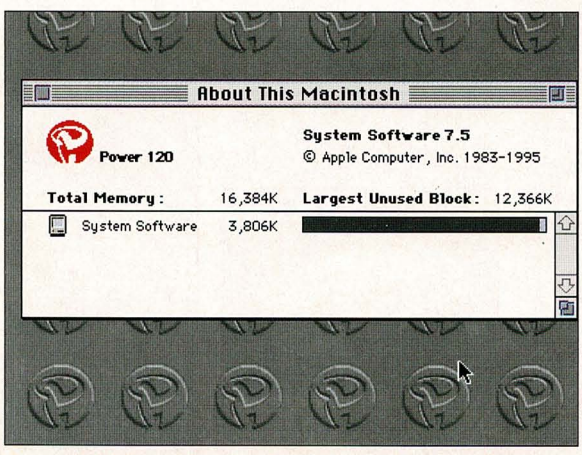
If your budget can stretch slightly, it's worth boosting your Mac's RAM. You can run the Performa 6200 with 8Mb, but you'll need to disable a lot of the features in System 7.5 first. Another 4Mb of RAM will cost you around £115. If you can't afford more RAM, you could opt for the Performa 630. It's not a PowerMac, but the current street price is about £350 less than the 6200 and it runs with 8Mb of RAM better than a PowerMac does.

Alternatively, if you find yourself with a little spare cash, you should really consider the new PowerMac 7200/75. It's only £100 more (without the CD-ROM drive), but has greater upgrade potential and uses the new PCI (Peripheral Component Interconnect) bus, which is faster and cheaper than NuBus. You'll still need to buy more RAM, though.

■ **Samsung 15GL SyncMaster monitor for £286.**
This is one of the best value monitors currently available, and received a resounding 90% in MACFORMAT 26. The 15-inch monitor is capable of a maximum resolution of 1,024 x 768 pixels, giving you plenty of Desktop space, and has 11 user-definable presets, so you can set it up to suit your individual needs. Don't forget to ask the dealer for an adaptor to connect this monitor to your Mac – it's an extra £15 (which we've included in the price here).

■ **Microtek ScanMaker II scanner, coming with *Photoshop 3.0 LE*, ScanWizard and OmniPage Direct OCR, for £340.**
You'll need a scanner if you intend to do any serious image editing on your Mac. Otherwise, it's just a fun thing to have, so if you're working on a tight budget or simply must have that PowerMac 7200, then it's expendable.

The Microtek ScanMaker II is an excellent entry level 24-bit (millions of colours) scanner with an optical resolution of 300dpi. The scanner comes with *Adobe Photoshop 3.0 LE* (a cut-down version of the standard image editing program), Omnipage Optical Character Recognition (OCR) software, driver, one-year guarantee and a SCSI cable to attach it to your Mac. If your choice of scanner doesn't come with *Photoshop* or a similar image editing program, then you can use a shareware program such as the outstanding *GraphicConverter* (on this month's Cover CD), which costs $30 – about £20 – to register, or *Color It!*, which we gave away *free* on issue 31's Cover CD.



If you can't afford a *real* Mac, then take a look at the Mac clones. You may find you can pick up a clone for a lot less than an Apple Mac.

■ **Apple StyleWriter 1200 for £220.**
This is as basic a printer as you're ever likely to find, but is adequate for printing letters and the odd artistic masterpiece created in *ClarisWorks*. It's a mono inkjet printer with a resolution of 720 x 360 dpi, and comes with Monotype's *Fun Font Pack*.

■ **Supra 144LC FaxModem for £105.**
A modem is indispensable in these days of electronic communications. You can use it to send faxes from your favourite word processor and for dabbling with the Internet. This modem is only 14.4K baud – a respectable speed, but you can get more expensive ones that run twice as fast. You also need a communications package to tell your Mac what to do with your modem. The excellent shareware program *Z-Term* (which was on the MACFORMAT 13 Cover CD) makes a good budget comms package, with a registration fee of $30 (about £20).

■ **Extended Keyboard for £58.**
You can get a third party extended keyboard that comes cheaper than Apple's standard one.

■ **Total: £1,994,** inc VAT, which leaves plenty for a celebratory burger... MF

OCR SOFTWARE

When you scan in a document, the result is a picture of it. Optical character recognition software is used to convert the scanned document into a block of editable text that you can treat like any other text file on your Mac.

OLDER MACS

The first series of PowerMacs (the 6100, 7100, and 8100) are now discontinued, but some dealers still have stocks of these. It's worth asking if they have any special deals going on these models. No dealer wants to be left with obsolete stock, so try haggling over the price.

MORE FOR LESS

All the kit we have picked out here is branded, meaning that it's from well known and respected manufacturers. If your budget is really tight, try going for cheaper, 'unbranded' peripherals – available from many mail order companies.

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Power Mac 7500/100 16/1000CD	2067	Power Mac 8100/100 16/700 CD	2630
Power Mac 8500/120 16/2000CD	3177	Power Mac 9500/120 16/1000 CD+ ATI Video	2370
Power Mac 9500/132 16/2000 CD	4166	Power Mac 9500/132 16/2000 CD + ATI Video	4375
AWS 6150 16/700 CD Appleshare & Viper	2078	AWS 8150 16/700 CD DAT Web Server	2078
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FREE book "Desktop Design Techniques" with all Macintosh CPU's, only while stocks last.

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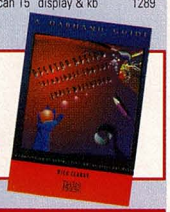
Group 1	StyleWriters, ImageWriters	15	55	92
Group 2	LC & Performa 400s, Scanners, CD-ROM Drives, Monitors up to 16"	15	84	126
Group 3	LC, Performa & Quadra 600s, Powerbooks, Duos, Colour StyleWriters Monitors over 16", Quicktake 100, LaserWriters	15	99	165
Group 4	Quadra 8/900s, Workgroup Servers, all Power Mac	15	135	220

APPLE MACINTOSH HARDWARE & BUNDLES

Mac Bundle	RAM	HD	Bundle includes	
Performa 630 8/500 CD Plus II	8	500	Multiscan 15" display & keyboard	1017
Performa 630 12/500 CD DOS	12	500	DOS Compatibility card, DOS 6.22, Windows 3.11 & kb	1168
Performa 630 12/500 CD DOS	12	500	DOS Compatibility card + Multiscan 15" display & kb	1289

FREE book
"Desktop Design Techniques"
with all Macintosh CPU's, only while stocks last.



POWER PC PERFORMA HARDWARE & BUNDLES

Performa 6200 Plus II 8/500 CD & keyboard			905	Performa 6200 Plus II 8/800 CDM & kb 1057
Mac Bundle	**RAM**	**HD**	**Bundle includes**	
Performa 6200 8/500 CD Plus II	8	500	keyboard	965
Performa 6200 8/800 CD M Plus II	8	800	Modem & keyboard	1057
Performa 6200 8/500 CD Plus II	8	500	Multiscan 15" display & keyboard	1139
Performa 6200 8/800 CD M Plus II	8	800	Modem Multiscan 15" display & keyboard	1289
Performa 5200 8/800 CD M Plus II	8	800	Modem, Built in 15" display & keyboard	1409
Performa 5200 8/800 CD M Plus II	8	800	Modem, V-in-TV, Built in 15" display & keyboard	1409
Performa 5300 16/2000 CD M Plus II	16	2000	Modem, V-in-TV, MPEG, Built in 15" display & k/d	1894

FREE book "Desktop Design Techniques" with all Macintosh CPU's, only while stocks last.

Plus II bundles include the folowing software

Installed Solution Software - At Ease, Mavis Beacon Teaches Typing, Claris Works 3.0 Milie's Math House, ClickArt, Perfoma 7.5 System Software, eWorld, SpinDoctor, Hypercard Player, SuperMaze Wars, MacGallery, Thinkin'Things 2.

Included CDROM Software - Asterix Language, Rediex, Concertware, Rock Rap & Roll, Dorling Kindersley 'The Way Things Work', Snoopy CD, EA 3D Atlas, Daedelus Encounter, Grolier's Encyclopaedia, Making Music CD, Myst.

In addition, modem equipped configurations ship with 'Jersonal Communications Solution', and TV configuations are supplied with 'Avid Videoshop' and Apple VideoPlayer'.

The Perfoma 5300 MPEG machine also comes with bur MPEG CD titles
Ocean Life Hawaii, Return to Zork, Warren Miller, Wild Africa.

APPLE MACINTOSH POWERBOOKS

	RAM	HD	CPU	Screen	
Powerbook 5300	8	500	100MHz 603e	9.5 GS PM	1375
Powerbook 5300C	8	500	100MHz 603e	10.4 AM	2292
Powerbook 5300CS	8	500	100MHz 603e	10.4 PM	1734
Powerbook 5300C	16	750	100MHz 603e	10.4 AM	2792
Powerbook 5300CS	16	750	100MHz 603e	10.4 AM	2172
Powerbook 5300CE	32	1100	117MHz 603e	10.4 AM	4247
Powerbook 5300C Powerport Plat Modem	8	500	100MHz 603e	10.4 AM	2604
Powerbook 5300C Powerport Plat Modem	16	750	100MHz 603e	10.4 AM	3104
Powerbook 5300CS Powerport Plat Modem	16	750	100MHz 603e	10.4 PM	2484
Powerbook 5300CS Powerport Plat Modem	8	500	100MHz 603e	10.4 PM	2047
Powerbook 190	4	500	66MHz 040	9.5" GS PM	1010
Powerbook 190	8	500	66MHz 040	9.5" GS PM	1154
Powerbook 190CS	4	500	66/33Mhz LC040	10.4 PM	1317
Powerbook 190CS	8	500	66/33Mhz LC040	10.4 PM	1464
Powerbook 2300C	8	750	100MHz 603e	9.5 AM	call
Powerbook 2300C	20	1000	100MHz 603e	9.5 AM	call

Key: EM = Express Modem, GS = Greyscale, GV = Global Village, PM = Passive Matrix, AM = Active Matrix

Powerbook Type II/Type III Battery	85	Powerbook External 1.44Mb drive	95
Powerbook 1xx AC Adaptor	38	Powerbook 500 AC Adaptor	95
Powerbook Standard Carry Case	20	Powerbook Business/Designer Carry Case	40
Powerbook 5300 Lilon Battery	89	Powerbook 190/5300 AC adaptor	39

MEMORY

72 Pin Simm	4Mb	8Mb	16Mb	32Mb
PMac, Quadra, LCIII/475, Perf 475/630/5200/6200	90	185	369	625
Powerbook 520, 520c, 540, 540c	130	265	449	
Powerbook 150,	149	249		
Powerbook 5300		279		

	1Mb	2Mb	4Mb	6Mb	8Mb	16Mb
Personal Laserwriter 320		82		229		
Laserwriter Select 300/310	65		165			
Laserwriter 16/600			145		260	520
Laserwriter Pro 630			150			

Dimm Memory	4Mb	8Mb	16Mb	32Mb	64Mb
8500, 9500, 7500, 7200	140	205	374	740	1458

Video RAM	256k	512k	1Mb	2Mb
	15	25	65	120

Secondary Cache Memory	256k	512k	1Mb
PowerMac 6100/7100/8100	105	199	385
PowerMac 7200/7500/8500/9500	95	160	410

ACCELERATORS

Fastcache IIsi 64k	78
Powercache 40MHz NoCoPro	93
Turbo040i 33MHz NoCoPro	172
Powercache 33MHz NoCoPro SE/30	107
SCSI Powercard NuBus 0Mb RAM	29
Turbo040 25MHz CoPro IIci/si	81
Turbo040i 20MHz NoCoPro	81
Fastcache Quadra 128k	38
Powercache Adaptor IIx	29
Turbo040 33MHz Universal CoPro	240
Fastcache IIci 32k	61
Fastcache IIci 64k	78
Powercache 50MHz NoCoPro	159
LT200 Connection Appletalk MCA	16
Turbo040 33MHz & CoPro	117
Turbo040 25Mhz Universal CoPro	81
Powercache Adaptor LC/LCII	29
Powercache Adaptor LCIII	29
Adaptor IIx	29
Powercache 50MHz & CoPro SE/30	211
Charger Accelerator	58
Equalizer LC	65
Adaptor II	29
Powercache 40MHz CoPro SE/30	194
Quad040 Accelerator	324
Turbo040i 33MHz NoCoPro	162
Photomatic Mac FD	3
Powercache 33MHz & CoPro	117
Adaptor IIcx	29
Image040 Accelerator	519
Adaptor Classic	29
DualPort IIsi & CoPro	48
Powercache 40MHz NoCoPro SE/30	117
Turbo040 33MHz & CoPro IIsi/ci	117
Powercache 40MHz & CoPro	163
Equalizer LC & CoPro	91
Powercache 33MHz Univ NoCoPro	93
Powercache 33MHz CoPro SE/30	117
Turbo040 40MHz & CoPro	233

APPLE HANDHELDS

Message Pad 120	395	Connectivity Kit Mac	55
Fax Modem card	80	Print Pack	45
Mains Adaptor	18	1Mb Storage card	60
2Mb Storage card	110	4Mb Storage card	200
NICAD Battery Pack	16	Leather Carry case	40
Recharger & Mains	54		

SOFTWARE

GoFigure	25	PocketCall	65
ExpensePlus	38	Notion List Manager	30
Jig Saw	16	FilePad	75
TapWorks	54	Newton Utilities	23

PCMCIA SOFTWARE

Fodors 94 Travel Mgr	23	Berlitz Interpreter	65
Time Out Guide	38	Newton Enh Pack	90

CARRY CASES

TARGUS

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Notepac black	26	Notepac green	26
Premier Leather case	107	Fabric Premier	75

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HARD DISKS

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CFP2105 (2.1Gb)	425	CFP2107 (2.1Gb)	510
CFP4207 (4.2Gb)	828		

D2

Extract 500Mb	225	Extract 1Gb	327
Extract 2Gb	792	Extract Dock	155

MICROPOLIS

2217 (1.7Gb)	585	4221AV (2.1Gb)	696
3243AV (4Gb)	1065	1991AV (9.1Gb)	1850

QUANTUM

TR850S (850)	170	FB540S (540)	119
FB1080S (1.08Gb)	201	XP32150 (2.1Gb)	545
GP4301S (4.2Gb)	670		

SEAGATE

ST31230N (1Gb)	332	ST32550N (2.1Gb)	701
ST15230N (4Gb)	863	ST410800N (9Gb)	1776

STORAGE OPTIONS

500A (500) Ext kit	261	1000P (1Gb) Ext kit	489

EXTERNAL CASES

3.5" Single Drive	60	5.25" Half Height	70
5.25" Full Height	120	5.25" Full Height x2	190

All with internal PSU

External Cased Hard Disks
Add together the price of the disk and case. Formatting, fitting and ID setting is free of charge.

ACCESSORIES

Design Keyboard	74	Extended Keyboard	128
Adjustable Keyboard	149	Desktop II Mouse	35
PlainTalk Microphone	20	Design Speakers II	46
MIDI Interface	53	Security Kit	34
Microspeed Mouse	35	Microspeed Keyboard	65
Performa V-in card	85	Performa V-in-TV	215
Performa Presentation kit (Video Out)			199
Power Mac Upgrade Card			545
Power Mac 6100 DOS Compatibilty Card			385

LASERS

APPLE

LW 300	409	LW Select 360	945
LW Pro 630	1180	LW 4/600 PS	559
LW 16/600PS	1505	LW 16/600PS & fax	1540
LW Colour12/600PS	4479		

HEWLETT PACKARD

LaserJet 5MP	710	LaserJet 4M+	1290
LaserJet 4MV	1960	LaserJet 4SiMX	2925
LaserJet Colour	4179		

HEWLETT PACKARD SUPPORT PACKS

LaserJet 5MP	135	LaserJet 4M+	170
LaserJet 4MV	220	LaserJet 4SiMX	505
LaserJet Colour	1280		

ORIGINAL HP LASER MEMORY UPGRADES

Printer	1Mb	2Mb	4Mb	8Mb
4M/4SiMX/1200/PJ	69	119	189	329
5MP/4M+/4MV/Colour	69	119	167	329

GCC

Elite XL 616 A3	2499	Elite 600 A4	925
Elite XL 608 A3	1845	Elite XL 808 A3	2799
Elite XL 1208 A3	3899		

PRINTERS

APPLE

StyleWriter 1200	188	StyleWriter 2200	256
StyleWriter 2400	314		

EPSON

Stylus Colour IIs	202	Stylus Colour II	255
Stylus Pro A4	385	Stylus XL Pro A3	1399

FARGO

Primera Pro	1299	Picturra 310	3420

HEWLETT PACKARD

DeskWriter 340	167	DeskWriter 600	182
DeskWriter 340+ASF	189	DW 340/600 Col Kit	28
DeskWriter 660C	240	Deskjet 850C	325
DeskJet 1600CM	1219		

MODEMS

APPLE

Geoport adaptor	96	Express Modem	285
520 Express Modem	315	Duo Express Modem	220
Performa Personal Comms slot Modem 14K4			169

ANDEST

RR Rocket Gold	125	RR Rocket Terbo Plat	135

DAYNA

Communicard 14.4 PCMCIA	220
Communicard 28.8 PCMCIA	325
Communicard RJ45 + 14.4 PCMCIA	295
Communicard RJ45 + 28.8 PCMCIA	405

GLOBAL VILLAGE

Teleport Bronze II	87	Powerport Bronze	89
Teleport Gold II	119	Powerport Gold	215
Powerport Gold PCMCIA	132	Teleport Mercury	250
Powerport Mercury	250	Teleport Platinum	195
Powerport Mercury	250	Powerport Platinum	299
Powerport Plat PCMCIA	325	Powerport Plat Pro PCMCIA	429

HAYES

Accura 144 + Fax	149	Accura 288 + Fax	180

MOTOROLA

3400 V34 28k8	140

MULTITECH

Internet in a box	235

SUPRA

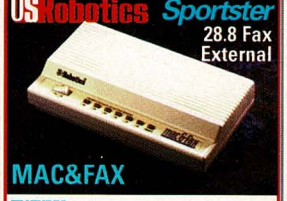
FaxModem 14.4 LC	89	FaxModem 28.8 v.34	165
FaxModem 144 P/B	135	FaxModem 288 P/B	135

US ROBOTICS

Sportster 14.4 + Fax	104	Sportster 28.8 + Fax	156

ZOOM

Zoom 144	93	Zoom 288	159



FEATURES

- Data Speeds; V.34 at 28,800bps, V.FC, V.32bis, V.32, V.23, V22bis, V.22, V.21, Fax:V.17 at 14,400bps, V.29, V.27ter
- V.42/V.42bis MNP 2-5 Error Correction/Data Compression
- Fax Class 1 & 2.0, Group 3
- Asynchronous operation
- Mac serial cable and MacComCenter software supplied
- BABT Approved

£156

SCANNERS

AGFA

StudioScan IIsi full	599	Arcus II & Tranny	2219
StudioScan IIsi Lite	529	IISi Tranny unit	269

APPLE

OneScanner	360	Colour OneScanner	555
QuickTake 150	360		

EPSON

GTx 5000	299	GTx 8500	473
GTi 8500	645	GTx 9000	571
GTi 9000	740	Lapcat Scanner	281
Transparency Unit	365	Document Feeder	319

HEWLETT PACKARD

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MICROTEK

Scanmaker II	279	Scanmaker IIHR	306
Scanmaker II SP	306	Transparency Unit	275
Scanmaker III/Tranny	1146		
Photoshop LE	30	Photoshop Full	130

Photoshop can only be bought with above scanners

NIKON

CoolScan External	990	ScanTouch	729
Super Cool Scan	1325	LS04500AF	5890

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Vista T630	299	Vista S8	540
Vista S8 Pro	955	UC1260FE	765
UC1260LE	620	UC1260 Pro	1035
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VISIONEER

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- 4800x4800 max res. thru Ultra View technology
- 3 Pass, RGB filter
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- 6400x6400 max res. thru Ultra View technology
- Single-pass, colour CCD
- VistaScan Software Driver

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- Accugray Enhancement
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- Automatic Emulation Sensing
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Applevision 1710AV	665	MultiScan 20"	1299

IIYAMA

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NEC

Multisync XV14	212	Multisync XV15	273
Multisync XE15	388	Multisync XV17	549
Multisync XE17	680	Multisync XP17	895
Multisync XE21	1139	Multisync XP21	1745

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447V090 17"	475	447B090 17"	519

NOKIA MULTIGRAPH

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447X090 17"	670	447M092 17"	685
447X092 17"	710	445M090 21"	1299
445M092 21"	1415	445X092 21"	1599

PHILIPS

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17A 17"	685	20C 20"	775
20T Trinitron 20"	1065	21B 21"	1299

RADIUS

PrecisionColor 17	820	PrecisionCol 20V	1135
PrecisionColour Pivot	610	Pressview 21T	1530
Pressview 17SR	1565	PrecisionView 17	615
Intellecolour 20E	1249		

SONY

CPD-15SF1 15"	297	CPD-17SF1 17"	569
GDM-17SEIT 17"	785	GDM-20SEVT 20"	1215
GDM-20SEIT 20"	1360		

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D2

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inc. cables, drivers & Retrospect Remote

WANGDAT

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IOMEGA

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SYQUEST

88Mb	230	105Mb	225
200Mb	345	270Mb	349
EZ135 135Mb	149		

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CD-ROM DRIVES

APPLE

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D2

4X External	230		

NEC

3xp+ External	245	6xe External SCSI	369
3xp/4e Mac software	31	Dual Speed Ext Kit	115

TOSHIBA

XM5201S 3.4x Ext	195	XM3601S 4.4x Ext	299
XM3501S 4x Ext	325		

DIGITISERS

CALCOMP

A5 DrawingSlate	205	A4 DrawingSlate	269
A3 DrawingSlate	365		

WACOM

ArtPad II	129	ArtPad II + Dabbler	155
ArtPad II + Painter 3	359	A5 Tablet+Painter 3	485
A5 Tablet	255	A4 Tablet	355
A3 Tablet	559		

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Ethernet NB	155	Ethernet LC	95
Ethernet NB TP	80	Ethernet LC TP	68
BNC/TP Transceiver	34	AUI Transceiver	54
CommsSlot UTP/BNC	55	CommsSlot AUI	55

DAYNA

Communicard RJ45 PCMCIA	130		
Communicard BNC PCMCIA	155		

DAYNAPORT ETHERNET INTERFACES 10BT-2 THIN & 3 MEDIA

E/Z Ext. 10BT Ethernet interface, any mac	209		
CS Ethernet interface, Performa 630	69		
E/SE-3 Ethernet interface, Mac SE	107		
E/II-3 Three media Ethernet int., all NuBus Macs	107		
E/LC Ethernet interface, Mac LC family	75		
E/LC-M Ethernet int., Mac LCIII, 10BT & Thin	107		
si/30-3 Ethernet interface, Mac IIsi	107		
si/30 Ethernet interface, Mac SE/30 & IIsi	99		

DAYNAPORT ETHERNET INTERFACES 10BT

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PrecisCol 8XJ	385	PrecisCol Pro24X	730
VidVision Studio v2	3510	Spigot Power AV	680
Thunder 24GT	1135		

RADIUS PCI

PrecisCol 8/1600	385	Thunder 30/1600	975
Thunder 30/1152	650	ThunderCol 30/16001610	
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DISCS	10	100	250
Unbranded 1.44Mb DSHD	50p	40p	35p
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CD RECORDABLE	**1**	**10**	**100**
650Mb/74min	8	7	6
CABLES	**2m**	**3m**	**5m**
Macintosh Printer	5	-	8
			1m **2m**
SCSI C50M-C50M			8 15
SCSI C50M-HC50 Micro D			19 29
SCSI HC50 Micro D - HC50 Micro D			29 39
SCSI C50M-HC68 Wide SCSI			65 -
SCSI HC50 Micro D - HC68 Wide SCSI			65 -
SCSI D25M-C50M			6 19

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SWriter 2200 blk	25	StyleWriter 2200 col	29
StyleWriter II/1200	14	SWriter Pro HiCap Blk	7
SWriter Pro Colours	8	SWriter blk Tank	11
SWriter Col Tank	17	SWriter 2400 Black	20
SWriter 2400 Col	25	Epson Sty Col, Black	12
Epson Stylus Col, Col	29	HP DW 310/320/Port	15
HP Deskwriter Black	18	HP Deskwriter Colour	18
HP DJ 1200CPS Black	17	HP DJ 1200CPS Cols	24
DJ 850C/1600CM Blk	20	HP DJ 850C Colour	25
HP DW 660C Black	19	HP DW 660C	20
HP Paintjet Colour	20	HP Paintjet Black	18
HP Paintjet XL Black	15	HP Paintjet XL Colours	17
HP Paintjet XL300 Blk	15	HP Pjet XL300 Colours	17

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LW Select 360	71	LW 16/600 Pro 630	91
LW Pro 810	200	HP Laserjet 4ML/4MP	43
HP IIlsi/4SiMX	85	HP Laserjet 4M/+	68
HP Laserjet 5MP	69	TI MicroLaser	30

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Zip 100Mb	12		

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- File protection
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- Surveillance
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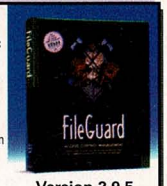

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FreeHand is a complete solution for graphics with the fastest and most comprehensive set of drawing tools available, open architecture for 3rd party Xtras, support for third party Photoshop filters, and a complete page-layout environment. FreeHand includes 500 fonts and 10,000 images.

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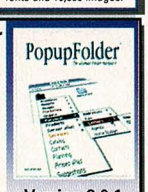

£29 Version 2.0.1 HIGHWARE

SOFTWARE

ACCOUNTING

Ritz Accounting	215	Ritz Median	129
Ritz Payroll	89	MYOB 5	call

BUSINESS

Lotus Notes Express	135	MS Mail 3.1	173
MS Project 4.0	289	Now Up-To-Date 3.0	49
Symantec C++ Pro	199		

CAD

MiniCAD 5.0	399	TurboCAD 3D v2	79

COMMUNICATIONS

Connect II	120	Fax Pro	69
Snatcher	35	MicroPhone LT	39
MicroPhone II 5.0	90		

DTP & FONTS

Acrobat 2.0	109	Acrobat Pro 2.0	269
Corel Photo CD	FROM 14	Corel Photo library	699
Fetch 1.2	99	Fontographer 4.1	297
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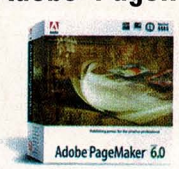

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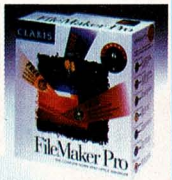

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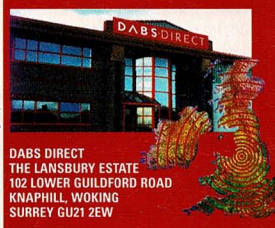

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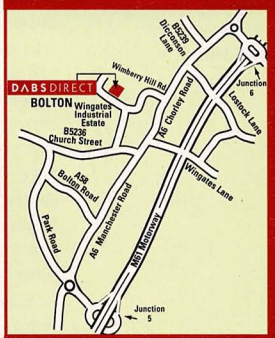

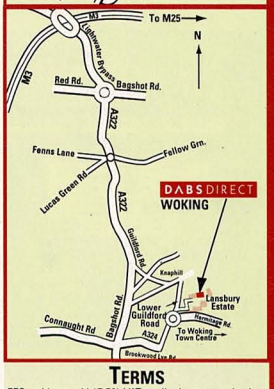

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Displaying your wares

Output – on-line, on video or on paper? How do you prepare your screen masterpiece for public adoration? Brian Larkman shows you how to cope with fame.

SOFTWARE USED

In our image editing series so far we've shown you how to create and manipulate images, using three main image processing programs: the unofficial standard, *Photoshop*, and two of the best budget systems – MicroFrontier's *Color It!* and *PhotoFix* from LePixel. All of these can also use plug-in programs to enhance their capabilities.

There are three popular ways of displaying your images to the rest of the world: on-line (that is, on a monitor), on video, or on paper. Each is beset with problems – what you see on your monitor is rarely what you see when you transfer it to another medium, so you have to tweak a whole series of variables just to make the final image match the screen. But before you panic, we do have a few solutions in hand. Let's start with the straightforward stuff.

On screen

The easiest way of displaying your work, obviously, is on a computer monitor – after all, that's what you viewed it on when you created it. You can display your work on the Internet, CD-ROM, or even via public domain floppy disk libraries.

But just because the image looks good on your screen doesn't mean it will look good on everyone else's. The range of hardware that might be used and the accuracy of its configuration can vary enormously. Whatever medium you transfer to, it's worth making sure your system is calibrated accurately; then any errors that occur will have been introduced by the viewer, not you. See the 'Let's Get Technical' panel on page 64.

Size is another major issue. No one wants to waste time waiting for huge images to appear on their computer – why should anyone go to all that effort when they don't even know if they'll like the image? Most of the time, the *maximum* size you'll need for your image is 72dpi, 640 x 480 pixels – the size of a 13-inch Mac screen. You should also keep the colour resolution to the minimum 256 colours.

These restrictions only apply to the final 'display' image. During the creation process, work with as high a resolution and colour depth as you like. Images that are properly resampled during resizing can look smooth and detailed even at tiny sizes, and numerous optimising, diffusion and dithering techniques are available to give the impression of thousands of colours when only 256 are actually present, as you can see in the Colour Stripping illustration in the walkthrough below. If you want to offer large, colourful, detailed works, provide them as JPEG files (which is a 'lossless' compression method) in addition to the small 8-bit GIF preview images, then interested viewers can download the high-res versions later.

On video

Displaying images on video is almost as straightforward as displaying them on a monitor because, like a computer, it is also a transmitted or 'additive' light method. This means that the RGB colour model can still be used (see the 'Let's Get Technical' panel). So scanned, processed, and painted images can be transferred directly to video as long as your Mac has a suitable output. You'll need either a Mac with built-in AV (audio visual) output, such as the 8500, or you'll have to add an AV card to your Mac.

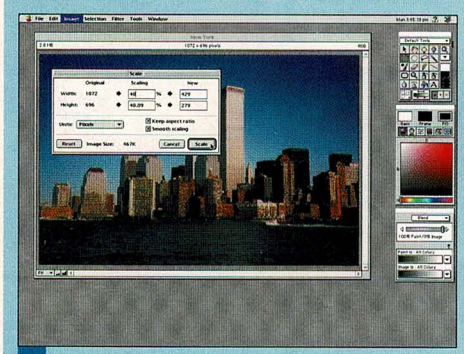
Once again, you must manage the size of the final image carefully. The working size can be anything you want, but it's easier if you use the same size or proportion as the final recorded image. Either way, you should ultimately reduce the size with careful resampling. *Photoshop*, *Color It!* and *PhotoFix* give similar final results.

Broadcast TV pictures currently have a width-to-height proportion of 4:3. This translates as 720 x 486 pixels for NTSC (the American colour TV system), and 768 x 576 pixels for PAL (the European colour TV system). Because 640 x 480 pixels also has a four to three ratio, you'll find that changing the size of your images is easy if you work at the same proportion as a standard Mac screen.

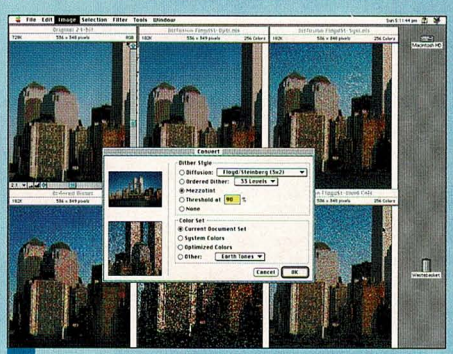
Although a TV can display many more colours than the 256-colour on-line limit, the Mac can produce shades beyond the range (gamut) of a TV. Saturated reds in particular tend to smear gruesomely across the scan lines, so use subdued colours. *Photoshop*, *Color It!* and *PhotoFix* are all capable of converting images to the more limited 'video safe' range, but the result can be a real disappointment. The better option is to familiarise yourself with the unsafe colours first and avoid using them.

There are several other tricks you can use to improve the look of images

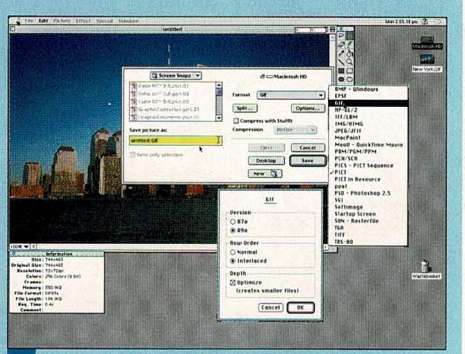
PREPARING ON-LINE IMAGES FOR PUBLICATION



1 Resizing and Resampling in *Color It!*
If you plan to put your images or previews on the Internet for downloading, they should be small yet show as much detail as possible. *Color It! 3* resamples rather than just resizing an image, and thereby manages to retain most of the detail. If you want to make high quality images available, produce them at a large size and save as JPEGs, then resample them down to a small size and save them as a CompuServe GIF preview.

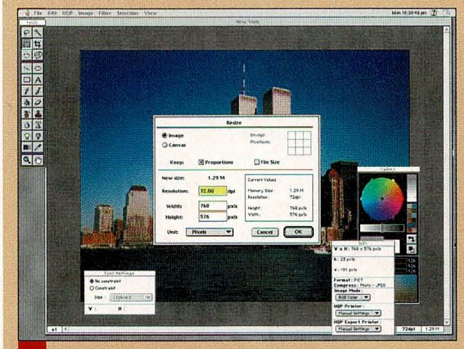


2 Colour Stripping in *Color It!*
When you save in 8-bit GIF format, the colours are stripped automatically, so you can control your image's appearance by reducing it to 256 colours first. *Color It!* provides several techniques, including (clockwise from top left): original 24-bit image; Floyd/Steinberg (FS) diffusion with optimised colours (this looks best); FS diffusion with Mac system colours; FS diffusion with vivid colours; Mezzotinting; and Ordered (pattern) dithering.

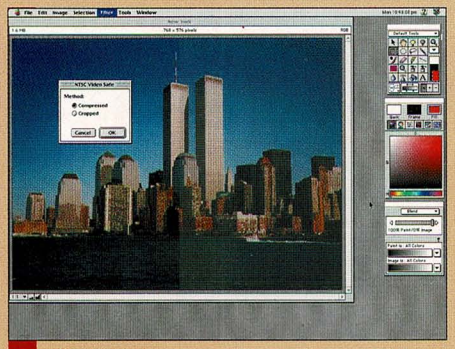


3 Converting to GIF Format using *GraphicConverter*
Of the three image processing programs we've covered here, only *Photoshop* can save in CompuServe's GIF format – and then only with a few options. Thorsten Lemke's shareware program *GraphicConverter* can convert virtually anything short of a dead armadillo to GIF, and will interlace it for faster download previewing.

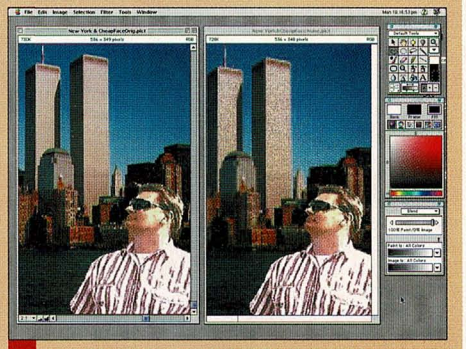
PREPARING VIDEO IMAGES FOR PUBLICATION



1 Resizing using *PhotoFix*
PhotoFix does a poor job of resizing images to a smaller size. Rather than resampling them, it just seems to discard pixels, with little attempt at smoothing.



2 Checking colours are video safe using *Color It!*
Macs can produce colours that are outside the range of a normal TV, and as a result transferred images can smear certain colours across the scan lines most unattractively. Use more subdued colours to avoid this. *Photoshop* and *Color It!* can 'subdue' an image to a more limited 'video safe' range by filtering the most vivid shades.



3 Adding Noise to your image using *Color It!*
If you need to mix a poor video grab with a reasonable background, as is the case here, you can reduce the image quality using a Mosaic filter to increase pixel size, then carefully use the Add Noise filter.

transferred to TV. First, broadcast television uses an interlace technique to produce its display, alternating between drawing the odd and even horizontal lines. This means that any single pixel horizontal lines in your image will flicker unbearably and should be avoided. Second, unlike computer screens, which have a black border around the edge, television displays are overscanned: the image area overlaps the edge of the screen slightly and is lost. This means you need to be careful not to place any vital aspect of your image at the edges. And finally, your computer-generated image will probably look a lot cleaner than a re-recorded video clip. *Photoshop*, *PhotoFix* and *Color It!* all have a Noise filter that can add video noise to dirty down your clean image to match the video.

On paper

Printing to paper is one of the most complex aspects of computer graphics. Transferring your image accurately from the brilliance of an illuminated colour screen to the dull surface of paper illuminated by the vagaries of local light is bound to be tricky. That an affordable desktop colour printer can get anywhere close is miraculous.

Your image editing software needs to be calibrated to your scanner, your monitor and the printer or proofing system you intend to use. With expensive print runs, for the best results, calibrate to the proofing machine, not the final printer – then the print professionals can use your accurate proof to set up their machines.

All three of the image processing programs used here provide tools which you can use to calibrate scanners and printers, saving calibration curves so that you can use them for future jobs. Spend some time adjusting these calibration curves and reprinting images on a trial and error basis until they match accurately and you can predict what the results will be. For ordinary desktop printing, it's time well spent. Calibrating your system accurately and knowing your monitor characteristics means that it can be used as a 'soft proofer' for halftones and colour images, saving time and money when it comes to printing.

Next, convert your image to the colour model that most nearly represents what the printed image will look like – usually CMYK mode (see the panel below). This involves using the Printing Inks Setup and Separation Preferences in each program – you'll need to peruse your software manual first to find out exactly what to do.

With *Photoshop*, converting to CMYK mode gives you a reasonable colour preview of what your printed image will look like, based on your calibrations, inks and other separation details. In *Color It!* you can only view the greyscale separation in CMYK mode. In *PhotoFix* there is no screen preview of CMYK at all, so you have to rely on trial and error.

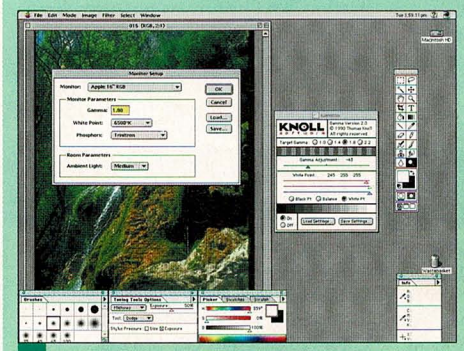
All professional printers require CMYK images for proofing, and although some desktop printers require

JPEG COMPRESSION

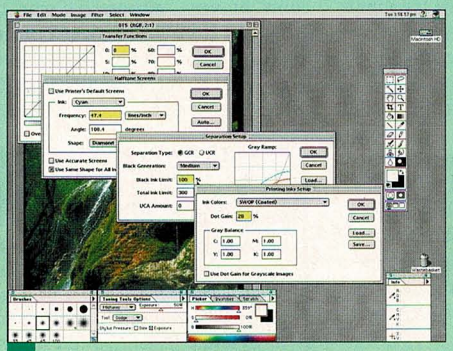
Dot based or bitmap images often take up a vast amount of memory, so a number of compression systems have been devised. Most involve a more compact way of recording the actual colour of each pixel so that no image data is lost – known as 'lossless' compression. The American Joint Photographic Experts Group (JPEG) devised a much more compact method that assumes a certain amount of data loss, balanced against file size and speed of compression/recovery.

Continued on next page

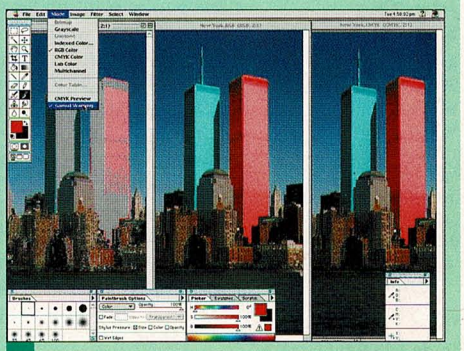
PREPARING PRINT IMAGES FOR PUBLICATION



1 Calibrating a monitor using the Gamma Control Panel in *Photoshop*
As you might expect, *Photoshop* is strong on calibration. Adobe provide Thomas Knoll's Gamma Control Panel for calibrating your monitors, although other calibration programs are available as shareware. For really accurate calibration, you'll need a hardware 'calibration puck'. You enter the results in the Monitors Setup Panel shown here on the left.



2 Printing Inks setup in *Photoshop*
Photoshop provides a huge range of controllable parameters in its various print and separation setup dialogues. *Color It!* and *PhotoFix* also give you a certain amount of control, although *PhotoFix* automates as much of the process as possible using its powerful and easy-to-use High Quality Printing (HQP) system.



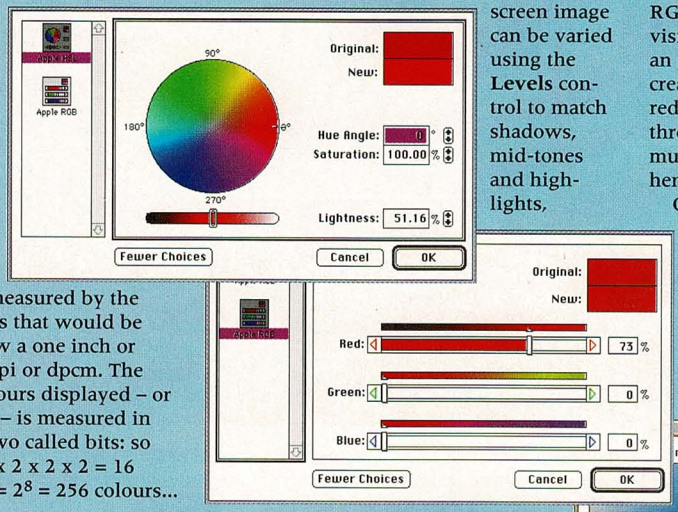
3 RGB, CMYK & Gamut warning in *Photoshop*
Converting from RGB to CMYK is often a real nightmare because many RGB shades are impossible to print using CMYK. All three programs make intelligent choices of similar colours, but the CMYK result is often very dull compared to the RGB original. *Photoshop 3* makes the process much easier than earlier versions, with its 'Gamut Warning' system, which makes unprintable colours paint in grey as you work (on the left).

LET'S GET TECHNICAL

■ Resolution: the amount of detail you can make out in an image is its resolution. Most paint programs (such as the ones used here) work by playing with a grid of square dots called pixels. The amount of physical detail and colour that these dots display in a picture define its resolution. The detail is measured by the number of dots that would be needed to draw a one inch or one cm line: dpi or dpcm. The number of colours displayed – or colour 'depth' – is measured in multiples of two called bits: so 4-bit = 2^4 = 2 x 2 x 2 x 2 = 16 colours; 8-bit = 2^8 = 256 colours...

■ Calibration: if you scan a colour photo into your computer and output it to a desktop colour printer, the result will, at best, be similar to the original. To achieve this, your scanner, computer, and printer all need to be calibrated together. *Photoshop, Color It!* and *PhotoFix* use a similar system for the calibrations.

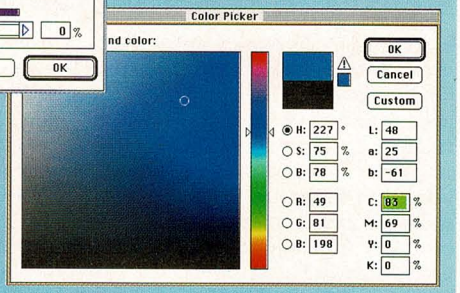
First, the monitor is calibrated to portray white as a true white of the correct temperature. Different applications, and even paper types, require slight variations of white. Next, your software can be calibrated to the scanner using a standard greyscale gradient or 'wedge'. This is scanned and matched to the screen display. The screen image can be varied using the **Levels** control to match shadows, mid-tones and highlights, producing an even gradient from dark to light. This profile is saved and applied automatically to every scan taken in future. Finally, a print is made from a standard image. The print is compared to the RGB screen image, and a range of parameters are adjusted until the final print matches the original screen version. You can find instructions for all of these calibration exercises in the respective software's manuals.



Color It! uses the standard Mac colour wheel, which displays every colour in the spectrum (above). For more precise colour creation, use the sliders (below).

■ Additive and subtractive processes – RGB vs CMYK. On a monitor or television screen, colours are created using an additive process. All colours can be created by mixing various shades of red, green and blue (RGB) light. All three added together at their maximum intensity produce white light – hence it is an 'additive' process.

On paper, which is normally itself white, the absence of all colour produces the brightest white – hence this kind of printing is a 'subtractive' process. Most colours can be created by adding cyan, magenta, and yellow (CMY). All three added together at maximum intensity theoretically produce black, but a muddy dark brown is usually the best that ink can produce, so black (called 'Key') is added – hence CMYK printing.



Photoshop can define colours in both RGB and CMYK – and convert between the two.

COLOR IT!

We gave away the full version of *Color It! 2.3.5* on the MACFORMAT 31 CD and HD Cover Disks. It contains everything you need to try image editing for yourself. If you missed that issue, turn to page 117 to order a copy.

INTELLIHANCE

Intellihance is a new Photoshop plug-in, which scored 90% in MACFORMAT 31. It claims to be a 'one stop automatic image correction system', which can analyse and then automatically correct brightness, contrast, gamma and saturation.

PRINTING BASICS

If all this talk of RGB, CMYK and resolution still sounds like a foreign language to you, turn to page 66 for more background information on output, printing, colour and all that sort of stuff.

CMYK images to print, others prefer RGB. Read your printer manual to find out which it prefers.

For the most accurate colour management system (CMS), you need to use *Photoshop* and a spectro photometer. This is a hardware device that detects the levels of light displayed by your computer monitor. One of the cheapest around is the Colortron from Lightsource, which retails at £1,056 – obviously, this isn't really an option unless you're printing for professional purposes. Not to worry – *Photoshop* also has its own self-contained CMS: it comes with a Control Panel called Gamma, which balances the colours of your monitor.

PhotoFix has a colour management system based on its HQP (High Quality Printing) system. Like the *Photoshop* CMS, it can be used for desktop as well as 'proofing' systems and provides calibration profiles for some common machines. It offers good facilities for proofing and separation of colour images at a low price, but the lack of a colour CMYK preview on-screen is limiting. Nevertheless, the HQP is convenient, requiring minimal effort – it gives you a decent print every time and you don't need to swot up on professional printing first.

Color It! looks less sophisticated, but it contains all you need to produce CMYK separations, calibrated manually. It also offers custom dithering and diffusion techniques, which are useful if you're doing greyscale printing, where halftone 'screens' are used to get a good range of greys from black dots on white paper.

Greyscales

Printing greyscale images can present problems even for professional systems, because, although a scan may have 256 grey values, most printers can only produce about 60 shades of grey from a single colour. To get a wider dynamic range, two, three or four shades of grey may be used to produce details in the highlight and shadow areas – called Duotone, Tritone, and Quadtone. Duotone printing is more expensive than colour and, increasingly, colour print technology is being used to produce Duotones. Only *Photoshop* offers Duotone previewing.

Intellihance is a *Photoshop* plug-in that can greatly improve your output quality. It provides excellent automatic image enhancement and scanner calibration, and improves on *Photoshop's* Printing Inks Setup. The *Photoshop* manual also includes some good explanations and tips on the whole process from scanning to printing. **MF**

WHERE CAN YOU GET THEM?

■ *Adobe Photoshop 3.0* costs £737.90. Contact Principal on 01706 832000.
■ *Color It! 2.3.5*, complete and accompanied by a selection of plug-ins, textures and clip art, was on MACFORMAT 31's floppy and CD. Turn to page 117 to order your copy if you missed it.
■ An upgrade to *Color It! 3.0.4* (which offers more extensive CMYK support, as well as other enhancements) is available for the bargain price of £44.95, simply by turning to our MACFORMAT Special Offers section, starting on page 114.
■ *PhotoFix 3* from Le Pixel costs £116.33 for the RGB version, which includes a CMYK module. Contact Linographic on 01252 376103.
■ *Intellihance* costs £116.33. Contact Principal on 01706 832000.
■ *GraphicConverter* is shareware and costs $35 to register. The latest version 2.1.4 is on this issue's Cover CD.
■ The Colortron from Lightsource costs £1,056. Contact Computers Unlimited on 0181 200 8282.

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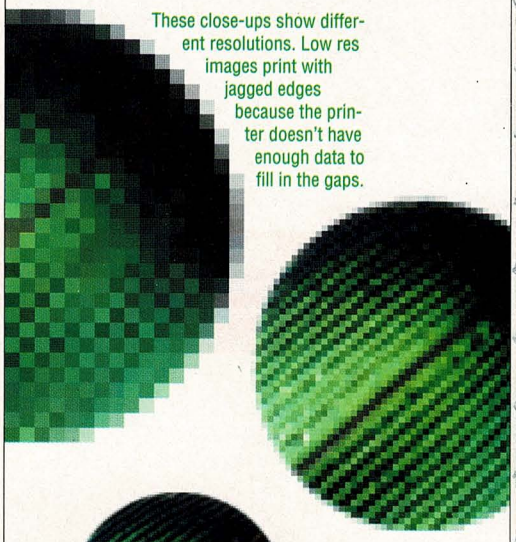
Getting the hard copy

Getting that masterpiece of art from your Mac monitor onto paper can be a black art full of horrible jargon. Lindsay Bruce explains it all.



These close-ups show different resolutions. Low res images print with jagged edges because the printer doesn't have enough data to fill in the gaps.

At slightly higher resolutions, the printout is still very blocky. The image on the left is at 100 dpi.

Zoom out and you can see the whole image quite crisply – Arthur the beetle, at a resolution of 250 dpi.

You've got your finished image on screen and you want to print it out. How do you go about this? Well, to start with, the resolution of your monitor will be between 60 and 90 dpi (dots per inch, where one dot is the smallest area the output device can generate) depending on make and model. However, printers scoff at such laughably low detail and generally work to 300dpi or more.

If you want to print a halftone image (one containing colour or grey, not just black and white), you need to know your printer's resolution. This is usually expressed in dpi, but what you need is the printer's screen frequency, which is expressed in lpi (lines per inch). This screen frequency tells you how well the printer can print halftone, or greyscale, images.

You see, to approximate the greys in a picture, the printer outputs a series of black dot clusters with empty space between them on the page. The overall effect is of a grey image. The higher the screen frequency of the printer, the smaller and closer together the dot clusters can be, hence the better the final image.

A 300dpi printer will usually have a screen frequency of between 50 and 60lpi, depending on make and model – the manual will tell you the exact figure. Once you have this figure, it's easy to work out what resolution you need to make your image before sending it to the printer.

If your image is scanned in, set the scanner to scan at roughly 2.5 times the screen frequency (lpi) of your printer. So on a 300dpi printer, scan at 60 x 2.5 = 150dpi. If you use a paint program to produce your image, you'll need to tell the program the resolution you wish to work at before you start.

THE BUREAU

If you are sending your image to a service bureau, or getting a friend to print it, ask them the screen frequency (or just 'screen') of the printer they are using.

QuickDraw vs PostScript

QuickDraw is the native Mac graphics imaging system, and is used to draw images on screen and print them out. QuickDraw is bitmap based, which means it takes the on-screen image and 'maps' each pixel and its colour. It then hands this list to the printer, which outputs them onto paper. The disadvantage is that QuickDraw maps pixels at the original file's resolution, which will probably be the same as your monitor – about 72dpi. The result is that even on a 300dpi or higher printer, you still get a 72dpi printout.

PostScript is Adobe's page description language, and is based on mathematical vectors, so the printer is given a set of equations that describe your image. Providing your printer has a PostScript interpreter, it can translate these into an image of the highest resolution it can cope with. The beauty of this is that all PostScript files are resolution independent – meaning the

JARGON BUSTERS – BEGINNERS START HERE

dpi: dots per inch. How many dots a device can cram into one inch, whether it's a monitor, a printer, or a scanner. This is a measure of resolution, so the higher the figure, the sharper your graphics will look and the less prone to 'jaggies' they will be.

Jaggies: your Mac's screen resolution is low, displaying text and images at around 72dpi. Your Mac draws images on screen using square pixels (picture elements), hence diagonal or curved lines have a jagged edge to them. Your printer can only work with the information your Mac gives it, so when you output an image to your printer, you get a 'stair stepping' effect around the edges of the image, known as jaggies.

Line art: any graphic that does not contain greyscale or colour.

Halftone image: any picture on your Mac containing either greyscale or colour.

Halftone screen: the resolution to which an image is adjusted to get the best output from the printer. For example, on a 300dpi printer at 60lpi you would adjust to 60 x 2.5 = 150dpi to calculate the appropriate resolution.

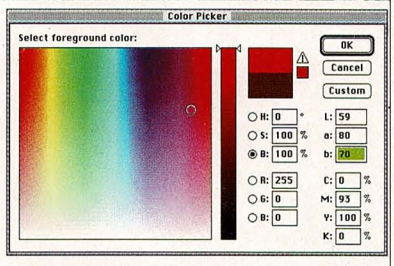
Screen Frequency: to produce greyscales, a printer must print dot clusters separated by blank paper – the same way black and white newspapers are printed. A printer's screen frequency is how many lines of dot clusters it can cram into one inch when printing a halftone image, expressed in lpi.

lpi: lines per inch. Similar to dpi, but based on a device's screen frequency. This is a measure of how well a printer can cope with halftone images.

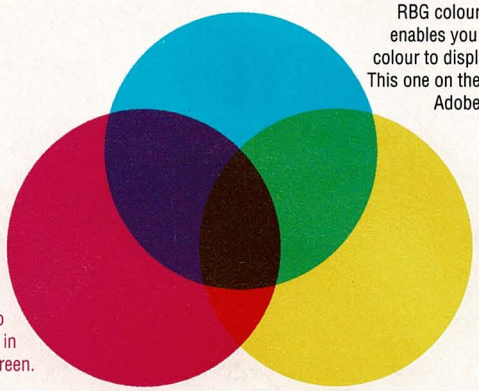
Colour separations: separate single colour images (usually on acetate film) which are combined to produce the final colour image. In colour printing the colours used are cyan, magenta, yellow, and black ('key'), or CMYK.

Colour printing is done using four base colours – the optical effect of different densities of these produces all the colours you can see. Above, from left to right, is a full colour image, followed by each of its colour separations: cyan, magenta, yellow, and key (black) – CMYK.

All paint programs have an RBG colour wheel which enables you to define any colour to display on screen. This one on the right is from Adobe's *Photoshop*

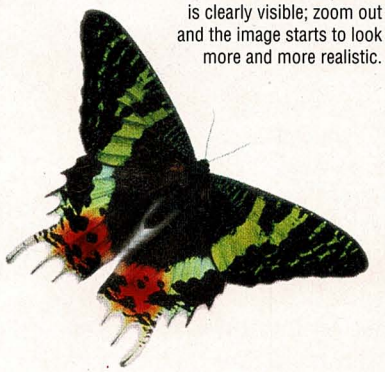


Colour on your monitor, sadly, works in a completely different way. (Additive, rather than subtractive, since you ask.) Three colour 'guns' – red, green, and blue – mix light to produce any colour or shade in the spectrum on screen.



Chuck a colour printout under a microscope and this is what you'll see. Colour printers recreate different tones and colours by overlapping dots of the basic printing colours – high-end printers and imagesetters can also produce quite a range of dot sizes. The optical effect at normal magnifications is a smooth gradation of lifelike colour.

This is how your printer deals with colour or greyscale images – it prints a 'mesh' of dots to give the illusion of colour gradients. At high magnification the dot pattern is clearly visible; zoom out and the image starts to look more and more realistic.



Using four base colours to produce a full colour image is all very well, but get each colour even slightly out of place and the results can be very ugly. This is known as misregistration.

same file can be printed just as easily on a colour imagesetter at the device's highest resolution as it can on a 300dpi mono laser.

If you do anything other than black and white graphics, you'll encounter the term 'colour depth'. Colour depth is the maximum number of colours an image can have. So an 8-bit image can contain up to 256 colours, while a 16-bit image contains up to 32,678 colours. Most graphic artists work in 24-bit (16.7 million colours) mode, which is deemed 'photorealistic'.

Colour printing involves printing three or more 'base' colours in differing densities to give the optical effect of almost any colour in the spectrum. Conventionally, the three primary – or base – colours are red, blue, and yellow, but extensive research into colour printing has proven that cyan, yellow, and magenta produce the best results. In theory, if you mix equal quantities of these together and print it to paper you should get black, but in practice you get a rather muddy brown. Because of this, a fourth 'colour', plain black, is used in colour printing, and is sometimes referred to as a key, hence CMYK (cyan, magenta, yellow, key).

High-end CMYK printing involves producing colour separations using an imagesetting device. The 'separations' are four photographic film images, one of each base colour pattern. These are used by the printers to make colour plates. Each plate prints a single colour to the paper going through the print press, and together they produce the final full colour image.

If you are using a desktop colour inkjet printer, then don't worry about CMYK separations – your paint program and printer will deal with it between themselves. **MF**

WHAT RESOLUTION?

To print anything more than a black-and-white drawing, here's the best resolution to save out the image:

Printer resolution	Screen frequency	Halftone screen
150dpi (standard)	30lpi	30 x 2.5 = 75dpi
300dpi (mid range)	60lpi	60 x 2.5 = 150dpi
600dpi (high end)	120lpi	120 x 2.5 = 300dpi

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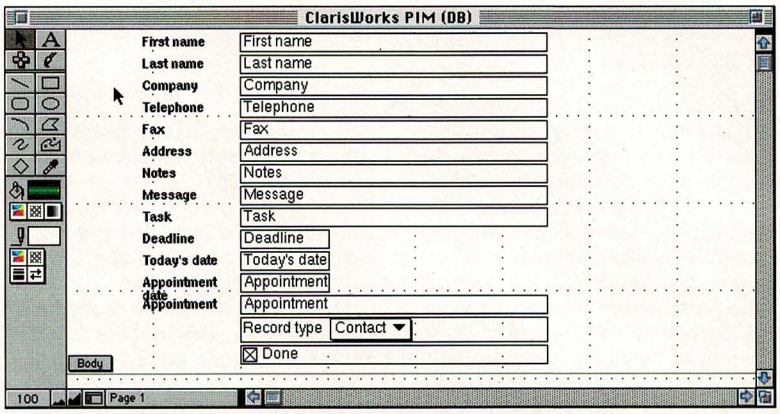
Working on your image

Databases needn't be boring lists and tables. Using their sophisticated layout tools you can create your own personal organiser. Rod Lawton explains...

Just because an application is 'serious', it doesn't have to look boring. Too many database users set up their files without even looking at the layout controls, and create a tedious-looking mass of regimented data that would cast a pall of gloom over the most happy-go-lucky office (yes, even the MACFORMAT office).

Yet database layout controls and tools are valuable for several reasons. You can create layouts for different needs and toggle between them at will. For example, if you have a contacts database, you can have a layout that just gives names and telephone numbers for regular use, and another layout (available in seconds) that gives lots more detail on each contact, including, for example, addresses, company names, fax numbers and more. And you can create layouts that are interesting (gasp). Yes, your database doesn't have to look like a dull patch in an accountancy seminar.



When you create a new layout in your database file, your first job is to pick the fields you want and delete the rest. Here all the fields are displayed in 'form' view for you to select from.

Create your own PIM

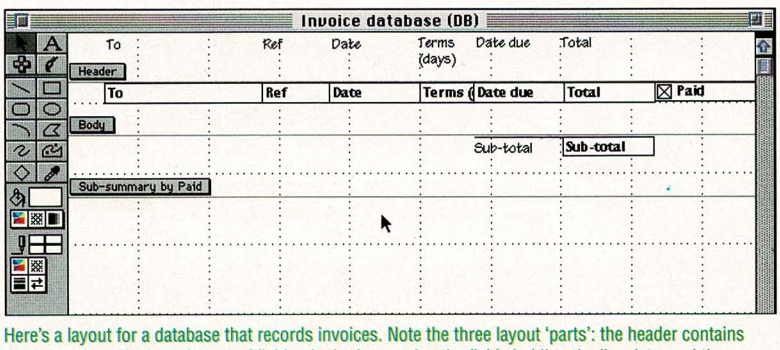
This idea of having many different layouts – and different sets of information each time – means you can combine lots of different databases into a single document. In MACFORMAT 31 we looked at a range of commercial Personal Information Managers ranging in price from £25 to £116, and how they stored contacts, to-do's and appointments – three distinct sets of data. Well, it's possible to create your own simple PIM, with separate 'contact', 'to-do' and 'appointments' modules, using a database application such as *ClarisWorks*. All you need is a single database file and multiple layouts.

You must first create a database file containing all of the fields needed for all three 'modules'. Then, you create individual layouts for each module. In each layout you only include the fields that are relevant to that module – so the layout for the 'to-do' module contains only a deadline date, the task in question and a checkbox to show whether you have finished the job or not. The 'appointments' module layout has fields showing the date of the appointment, the person you are to see and what the appointment is about. The 'contacts' module layout has the person's name, their company's name, their address, telephone and fax numbers and maybe some notes. You create all three layouts in a file that contains all these fields.

Choosing your fields

When you create a new layout in your database file, you're presented with all the fields in the file. It's up to you to choose which of these fields you want to include in each module's layout – if you don't want a field, you simply delete it. This only affects this particular layout – you're not deleting that field and its contents from your file.

If you later change your mind and want to re-insert a field into your layout, you can do that too. And if everything goes horribly wrong, you can simply delete the layout and start again, safe in the knowledge that you're only deleting a design, and not any of the data itself.



Here's a layout for a database that records invoices. Note the three layout 'parts': the header contains labels that identify the columns of fields; the body contains the fields holding the live data, and the summary part has a field that calculates the total amount outstanding from unpaid invoices.

Layout parts

When you're using your database application there are two modes of operation: 'layout' mode and 'browse' mode. When you're in layout mode you can enter information and create new layouts, and when you're in this mode you're presented with *all* the fields contained within the file. When you're in browse mode you can view the layouts you've created, containing only those fields that you've chosen to be displayed, and you cannot change or insert information. You'd create the modules that we talked about earlier in layout mode, then view them in browse mode.

Database layouts can have a number of 'parts', which you may not always see in browse mode, but which you can add, delete and edit in layout mode. Three of these are the body, header/footer and summary parts.

The body part is where all your data is stored – that is, all the information for each record, containing all the fields. You can view this information in either 'form' (as in the picture above) or 'list' view. In list view, the data is arranged with the fields along the tops of the columns, and with one record per row.

You can also create header and footer parts for your layouts. These are like headers and footers in word processor documents, and appear only at the tops and bottoms of pages. You'd use a header or footer if you were going to print out your database and wanted each sheet of paper to be labelled with, say, the information it

YOU CAN'T GO WRONG!

Well, not easily, anyway. When you create and edit database layouts, you are not touching the data itself. When you delete a field in a layout, you are not deleting it at all; you're merely electing not to show it in that layout. And layouts are entirely independent of one another. A style you apply to the 'name' field in one layout won't affect its style in another layout.

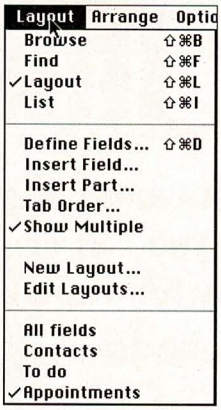
IS IT THAT EASY?

No. You'll have more work to do later if you want to view only one of the three 'modules' – to-do's, contacts or appointments. If you change layouts without first selecting only the relevant type of record, you'll simply view all your records as contacts, to-dos or appointments, whether they are or not. You need to identify each record as one of the three, and sort them out before you change layouts. We'll be looking at macros, sorting and other data-mangling techniques next time – and applying them to this month's PIM database to make it a match for any commercial organiser package.

Continued on next page

DRAWING SKILLS

We haven't included specific instructions on using the drawing tools, because these tend to be standard from one Macintosh application to another. Some database applications also offer you painting tools.



The **Layout** menu from *ClarisWorks*. From here you can create layouts, modify them, delete them and switch your current view from one layout to another.

contained, the name of the database, and any other reference information.

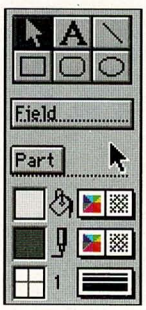
As well as headers and footers, you can also have 'summary' parts. We haven't used any in this issue's example, but this is where you should put special fields that calculate totals. An invoice database might calculate total sums outstanding, for example. While headers and footers appear regularly at the tops and bottoms of pages, summary parts are inserted automatically by the database, depending on your search criteria and the types of summary you're carrying out. If you were to sort your invoices into paid/unpaid invoices, you could have a summary appearing at the end of the list of unpaid invoices.

All three types of layout part can be designed using the same tools. Bear in mind, though, that you can't use fields containing 'live' data (which is different from one record to another) in a header or footer, and that you can only use special summary fields in summary parts.

Tools of the trade

Any database application worth its salt will provide layout tools that enable you to move fields around, create coloured boxes and shapes, import PICT graphics, create text boxes and basically do all the things you'd expect in a Mac drawing program.

You can use these tools to produce colourful, well-designed backdrops for your data. You can move around the database fields, colour the text, make the fields transparent or opaque, and give them borders. Naturally, you can also change font, point size and text style. Using *ClarisWorks'* design tools we created separate, distinct layouts for each of our three PIM modules. You might not like the design sense, but they demonstrate the flexibility offered by even a modest database.



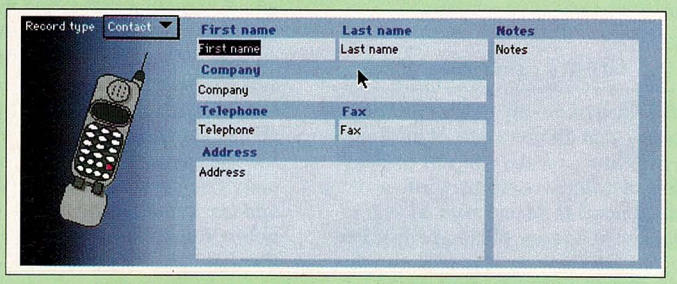
FileMaker Pro's layout tools. They're slightly less sophisticated than those offered by its smaller brother, *ClarisWorks* (which shares the full set of drawing tools used by its sister modules), but they're capable of creating exciting layouts.

A little effort spend on designing your data layouts is worthwhile. Good layouts can dramatically improve efficiency by displaying only the information you need for specific tasks, and add style to applications that might otherwise be less than fun to use. **MF**

LOOKING THE PART

These are the three 'designed' modules I designed for my personal organiser database. They work very simply – they select fields from those in the file and use *ClarisWorks'* drawing tools to add a bit of colour.

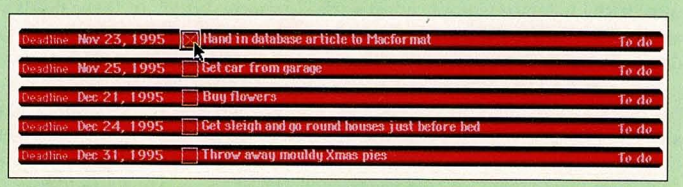
Note that each layout has a pop-up field that says whether it's a contact, a to-do or an appointment. These will be necessary later on when we come to sort the records out into each type. If your application doesn't offer pop-up fields, use a normal field. Most applications enable you to add pre-defined 'responses' to fields, which makes selecting the right field fast and semi-automatic. If your database application won't even do that, you'll just have to do it manually... or get some better software. Using *ClarisWorks,* I could instead have used a trio of radio buttons to identify the record type. Radio buttons are created in sets, and you are only allowed to select one – so when you click on a radio-button to select it, any radio-button that was previously selected is automatically deselected.



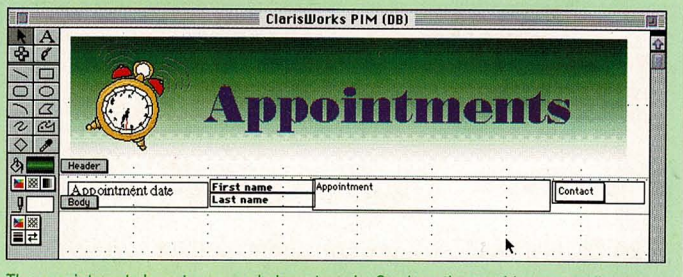
I went for a typical 'contact card' look here. The background is a coloured rectangle, the phone is from one of *ClarisWorks'* clip-art libraries (any PICT image will work) and the fields themselves have been given a coloured background. I used the field labels so that users could see what the fields were after they had typed in the information. Field labels are small text boxes that are created by default when you create a field – you can delete, move and modify them much like any text box you create yourself.

Appointments
Nov 22, 1995 William Clinton I promised him half an hour on the Nicaraguan problem, if I have time. Appointment
Dec 20, 1995 Alex Summersby Free lunch and presentation of complimentary Christmas hamper. Appointment
Jan 1, 1996 Doctor McCoy Consultation over hangover cures and avoidance of unconsciousness. Appointment
Jun 10, 1996 Bank Manager Develop payment plan for £5.95 overdraft. Appointment

Here the appointments are arranged in a list form underneath a graphic 'header'. You can use headers in layouts to add graphic interest and reference information, without cluttering up each record. At the moment, the appointments layout only quotes dates, not times. With a little additional work it is possible to include times, and even check for double-booking. This involves more serious database-engineering, which we'll tackle later in the series.


Deadline Nov 23, 1995 Hand in database article to Macformat To do
Deadline Nov 25, 1995 Get car from garage To do
Deadline Dec 21, 1995 Buy flowers To do
Deadline Dec 24, 1995 Get sleigh and go round houses just before bed To do
Deadline Dec 31, 1995 Throw away mouldy Xmas pies To do

Because you'll probably want to view all your to-do's in one go, it makes sense to arrange them as a list. Using a checkbox to mark jobs you've finished is more than cosmetic – it enables you to carry out searches to eliminate completed to-do's. Not all database applications offer checkboxes, but you could achieve the same effect by creating a field that contains either 'done' or 'not done' and base your searches on that.



The appointments layout, as seen in layout mode. See how the graphics are confined to the 'header' zone, while the data fields themselves are in the narrow 'body' zone. You can drag the dividing lines of the header and body zones up and down to change their relative sizes. Using a narrow body zone enables you to get more records on screen at once.

HEADERS

Don't forget: if you want to add graphic elements to every record, add them to the body part of the layout. If you just want a single graphic at the top of the screen, create a header in the layout and put it there.

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Nintendo64
The inside story

No other hardware launch has been as clandestine. No other gamebox has so much to live up to. **Edge** reports from Tokyo on the debut of Nintendo's 64bit machine and interrogates the visionaries behind it

Voted **Magazine of the year**
IN∅IN
Industry awards

Issue **twenty-nine** onsale
12 January 1996 at selected newsagents

MAC ANSWERS

Ah, Christmas. Stuffed turkey, pine needles, and sad Macs. Put a party hat on your Mac – and if that doesn't fix it, write in to our MacAnswers section instead.

Welcome to MacAnswers, the bit of the magazine where we solve your Mac problems. If you were lucky, you may have got a Mac for Christmas. If you were unlucky, you might have had a tiny wee problem with it. That's why we're here, and it's just as well, because otherwise we wouldn't have jobs, and our kids would have to go without presents this year.

If you have a query, fill in the form on page 76 and send it in. You can also send questions by e-mail – address them to **macformat@futurenet.co.uk**. Please include full details of your Mac in your e-mail. Sorry, but we can't answer your questions over the phone or reply personally to e-mail, because we're all down the boozer celebrating New Year.

A proper Mac

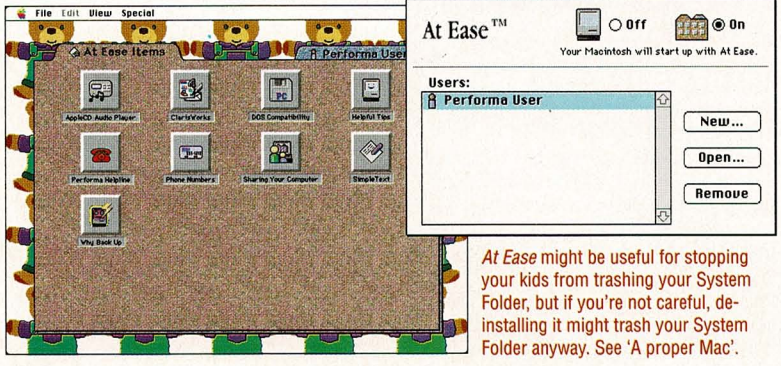
SYSTEM

Q *I have just bought a Performa 630 for my nephew and of course want him to use the proper Mac Operating System. In order to avoid buying a set of System disks, is it possible to load a new System from copies of the set that I keep for my LCIII (System 7.1)? If not, can I disable* At Ease *and use the Finder conventionally?*
Julian Pearcey
via e-mail

A *At Ease* is Apple's simplified replacement for the Finder, designed to stop your inquisitive four-year-old investigating the deleting properties of the Wastebasket. The Performa 630 ships with System 7.5 installed on it, so it won't be interested in starting up from any pre-System 7.5 disk. Even if you could get it to start up in System 7.1 from your LCIII disks, you'd be breaking Apple's System software licensing terms.

The good news, though, is that you don't need to go to such drastic measures in the first place. All you need to do is de-install *At Ease*. Just open the At Ease Setup application and switch it off – if you have a password, you'll need to enter it. Restart your Mac and the Finder will load instead of *At Ease*.

Note for the wise: trashing *At Ease* without switching it off first is a definite no-no. When installed, *At Ease* makes a few alterations to your System File so that it loads on startup, instead of the Finder. If you trash *At Ease* without switching it off first, your Mac won't start up at all.



At Ease might be useful for stopping your kids from trashing your System Folder, but if you're not careful, de-installing it might trash your System Folder anyway. See 'A proper Mac'.

Silicon tortoise

UPGRADES

Q *I recently bought a second-hand Classic and want to upgrade it.*
1. Is it true that I can't upgrade my Mac's memory beyond 4Mb?
2. Can I run System 7.5 on my Mac? Will it turn it into a silicon tortoise?
3. Am I likely to be able to connect a CD-ROM drive to my Mac?
4. Can I (and should I) connect an external hard disk to my Classic, or should I upgrade my existing internal hard disk?
Helvecio Da Silva
via e-mail

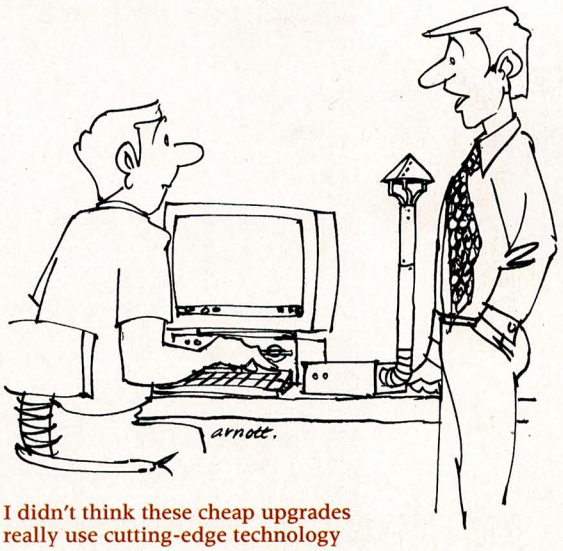
A 1. Yes, I'm afraid it is true, you cannot fit more than 4Mb of RAM into your black and white Classic. If you had bought a Colour Classic or a Classic II, you could have upgraded it to a healthy 10Mb of RAM, but you didn't, so you can't.
2. You can run System 7.5 on your Classic, but only the basic no-frills installation. And this will take up so much RAM, you won't be able to run any applications. So, in a word, no.
3. You can connect a CD-ROM drive to your Classic via the SCSI (Small Computer Systems Interface) port on the back of your Mac. You can in fact connect up to six SCSI devices to any Mac. There are plenty of different brands of CD-ROM drives around, so getting hold of one won't be a problem, but there are a few factors you should bear in mind. Make sure that the drive you buy is designed to work with a Mac. Make sure that you get the right SCSI cable – there are two types, one for connecting a SCSI device to your Mac, and another for daisychaining SCSI devices together. And don't consider buying anything slower than a double-speed CD-ROM drive unless it's cheap (£50 or less).
4. Connecting an external SCSI device to your Classic is no problem. Whether you should opt for an external or an internal hard disk depends on your personal preference, but, realistically speaking, there's no point in replacing the hard disk you have if it still works.

You are equally well off buying an external drive. That way, if you buy a newer Mac at some point (and let's face it, the Classic is getting on a bit),

WHAT'S SCSI?

SCSI (Small Computer Systems Interface), pronounced 'Scuzzy', is a connection protocol your Mac uses to 'talk' to storage devices and scanners. You can only connect eight devices together via SCSI, and your Mac and its internal hard drive count as one each.

Continued on next page



I didn't think these cheap upgrades really use cutting-edge technology

A SORE POINT

Font sizes are measured in 'points', a term dating back to the time when all printing had to be done using cast lead characters. There are 72 points to the inch, which just happens to be the same resolution as most monitors.

then you will be able to hook your external hard drive up to it.

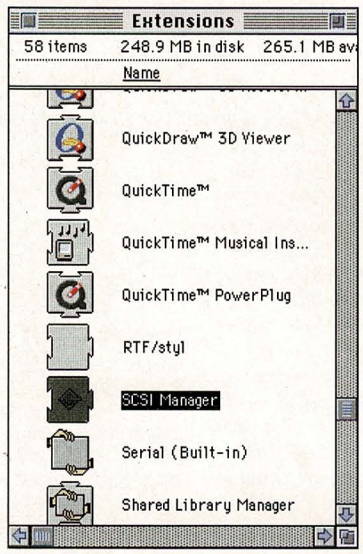
Out of tune

EXTENSIONS

Q Are Apple Multimedia Tuner, Sound Manager 3.1, and SCSI Manager 4.3.1 useful to an LCIII with System 7.5.1 or not, and why?

Nikos Moutsakis
via e-mail

A The Apple Multimedia Tuner Extension was released by Apple to fix a few bugs that people were experiencing with QuickTime 2.0. If you install QuickTime version 2.1 (on our Cover CD in the Resources folder), you can remove Apple Multimedia Tuner – just drag it to the Wastebasket.



Wouldn't it be helpful if, just occasionally, Apple told us what all the various Extensions were actually for? See 'Out of tune'.

The SCSI Manager 4.3.1 Extension provides your Mac with better SCSI (Small Computer Systems Interface) management than the version hardwired into your Mac's ROM chip (Read Only Memory – part of your Mac's hardware which stores a section of the Operating System). Your Mac uses the SCSI bus to move data to and from storage devices like your internal hard disk and most scanners. This Extension speeds up certain functions, such as copying files, and you should keep it in your Extensions folder, inside the System Folder.

The Sound Manager 3.1 Extension enables your Mac to play 16-bit stereo sound, which is, broadly speaking, compact disk quality. The current version, 3.1, also adds new compression/decompression algorithms (Codecs for short), which can reduce the amount of disk space that recorded sounds take up, without sacrificing sound quality. Most games and multimedia titles require Sound Manager to work properly, so unless you want a mute Mac, hold onto this Extension.

Font eviction

FONTS

*Q I have a problem with fonts on my LC475. I threw out a good number of fonts from the System Folder. Most of them left gracefully, but some, like Chicago and Monaco, remain on the menu although they are no longer in the Fonts folder. The **Find** command cannot find them, nor can **FindStuff**, and I have manually searched every folder on my hard disk for them to no avail. Yet they are on the **Fonts** menu and in full working order! Where are they and can they be removed?*

*Also, one of my fonts appears twice in my **Fonts** menu, once alphabetically, and again at the end of the list. Why?*

Mrs ES Lee
Tewksbury, Gloucestershire

A You won't find the last part of Chicago or Monaco anywhere on your hard disk – Apple have deliberately hidden them because your Mac needs them. Your Mac hides a 9pt bitmap of both fonts deep in its System files. All the menus, title bars and dialogue boxes on your Mac are displayed in Chicago, and you can't change this. If you were able to throw away this font, pandemonium would break out inside your Mac. Monaco is buried in there as well because it's used by low level programming tools such as *Macsbug*, the original Mac System level debugger created by Apple.

As for the duplicated font, you may have a PostScript and TrueType version of the same font in your Fonts folder. Or it may be that you have the same font from two different suppliers. Try dragging the font out of the Fonts folder and see if it still appears in the **Fonts** menu of your application.

Locked laser

PRINTING

Q Every time I need to use my laser printer, I get a message telling me to turn AppleTalk on in the Chooser, but when I try to, it tells me that its Preferences file is either locked or in use. I phoned Apple and they told me to reinstall my System Folder, but this hasn't worked. Can you help me, please?

Mark Evans
via e-mail

A It sounds like your AppleTalk Preferences file is damaged. Open the Preferences folder inside the System Folder and locate the rogue file. Drag it to the Wastebasket and then restart your Mac. You will need to reconfigure your AppleTalk settings, but your printer should now work.

RAM-and-a-half

MEMORY

Q I had quite happily been using RAM Doubler *for about four months, when I suddenly got a low memory message. Naturally, I looked at the **About this Macintosh...** box. Although it recognised that* RAM Doubler *was installed, the memory available for use had gone from 16Mb down to 12Mb! Why?*

Richard Gooch
Berrylands, Surrey

A Somehow, 32-bit addressing on your Mac has been switched off. Normally, your Mac needs 32-bit addressing switched on to be able to 'see' more than 8Mb of RAM. *RAM Doubler* can't actually 'double' your memory without 32-bit addressing enabled – as a result, it gives you 12Mb instead of 16Mb. The solution is simple: go to the Memory Control Panel and turn 32-bit addressing on.

Portable studio

UPGRADES

Q I would like to use Photoshop *and* KPT Bryce *on my PowerBook 540c. Can I buy an FPU, or is the PowerPC upgrade available yet? And what kind of cable do I need to connect my PowerBook to a PowerMac 7500?*

L Dark
East Dulwich, London

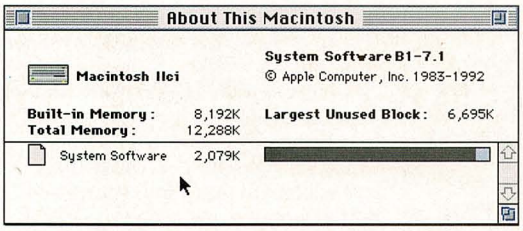
A The PowerBook 500 series PowerPC upgrade card is out now and comes with a 100MHz PowerPC 603e processor (with built-in FPU), 8Mb of RAM, and System 7.5.1. In order to use *Photoshop* and *KPT Bryce* on your PowerBook, you need to make sure you have PowerPC native versions of both. You will probably also need more RAM, as native *Photoshop* is memory hungry. The upgrade card will accept up to 40Mb of RAM, and you can use the existing SIMMs in

TROUBLESHOOTING KEYSTROKES

Having a few keystrokes up your sleeve is handy when you run into trouble, and it makes you look dead flash in front of all your mates in the office. Ahem, yes.

Here are some useful startup keystrokes. Just hold down the following keys during startup:

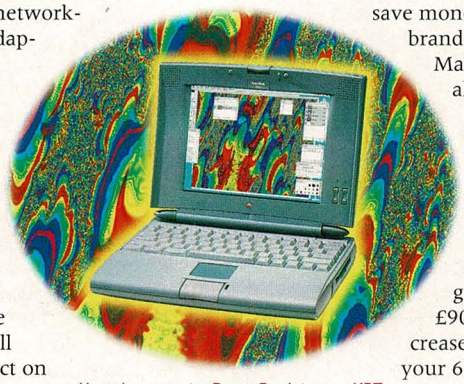
Keys	Action
[Shift]	Turns Extensions off.
[Command] [Option]	Rebuilds the Desktop files.
[Command] [Option] [Shift] [Delete]	Forces your Mac to start up from a disk other than the internal hard drive (assuming you have another disk with a System folder on it).
[Command] [Option] [P] [R]	Zaps the PRAM (Parameter RAM – a chip inside your Mac that stores the date, time, and certain details about your Mac's hardware).
[Command] [Option] [T] [V]	Switches your Mac's screen display from the monitor to a connected television set (this works on audio-visual Macs only).



RAM Doubler needs 32-bit addressing switched on to do any doubling. See 'RAM-and-a-half'.

your PowerBook on the card. You will need to get an Apple Authorised dealer to fit the card and any additional RAM you purchase, otherwise the warranty on both the card and your PowerBook will be invalidated. The card will cost around £590, and you'll have to pay the dealer to fit it for you.

To connect your PowerBook to the PowerMac 7500, all you need is a LocalTalk printer cable. But this is a quick fix; if you want to make it more permanent, you should invest in some proper networking cables and adaptors. Both the PowerMac 7500 and the PowerBook 540c have high-speed EtherNet ports, so getting hold of a couple of EtherNet transceivers and some suitable cable will make a big impact on the time it takes to copy files between the two Macs. The EtherNet transceivers are around £40 each and the network cable about £2 per metre. Nearly all Mac retailers sell EtherNet connection kits, so shop around for the best deal.



How do you get a PowerBook to run *KPT Bryce?* Easy, stuff a PowerMac inside. See 'Portable studio'.

Spot the difference

HARDWARE

Q *1. What's the difference between a Centris and a Quadra 660AV?*
2. Is there a PowerPC upgrade available for either of these machines?
3. What does the DSP do, exactly? Is it used by all applications?
4. Is the Quadra 660AV faster than the Performa 630?
5. What does the A/Rose Extension do?
Duncan van Trigt
Belgium

A 1. Originally, only two AV Macs were released: the Centris 660AV and the Quadra 840AV. Technically speaking, they are almost identical, but the 840AV has a higher clock speed (40MHz – the fastest non-PowerMac ever made) and three NuBus slots, to the 660AV's 25MHz and one NuBus expansion slot.

The Centris 660AV claims the dubious accolade of having the shortest product lifespan of any Mac ever made – it was released in August 1993 and officially discontinued in October, less than three months later. The Centris was rebadged a Quadra in the same month and was supported for nearly a year before being discontinued in September 1994. The only difference between the two is the name on the front and in the **About this Macintosh...** dialogue box.

2. There used to be a PowerPC logic board upgrade for the Centris/Quadra 660AV, but since the introduction of the new PowerMacs (which use different cases from the previous series), the logic board upgrade for the 660AV has been discontinued. If you shop around, you may find a retailer who still has one in stock. Be warned though, the street price for the logic board upgrade was around £1,200, which means you'd actually save money by buying a brand new PowerMac. A cheaper, although not quite as fast, solution would be to buy a clock-chipping accelerator, which you can get for about £90 and will increase the speed of your 660AV by about 30%. Contact Performance Direct on 01784 477477.

3. The DSP (Digital Signal Processor) inside the 660AV and 840AV Macs is used for a number of things. It can record video and 16-bit stereo sound (that's compact disc quality), handle speech recognition (you can even get your Mac to talk back to you), and provides you with a modem (although you need the GeoPort Telecom adaptor for this). Not all applications can use the DSP chip, since the function it performs is fairly specialist. Programs that can record and play back sound or video will benefit most from the DSP chip in an AV Mac, because it can digitise analogue signals faster than the main processor.

4. Which Mac is faster depends on what you want to do. The Performa 630 has a 68LC040 processor running at 33MHz, while the 660AV has a full 68040 running at 25MHz. For most applications, the Performa 630 will be faster, but for more demanding software which requires an FPU, such as spreadsheets, 3D programs, or any video or sound application, the 660AV beats the Performa 630 hands down.

5. The A/Rose Extension enables your Mac to 'talk' to an expansion card fitted in the NuBus slot on your Mac's motherboard. With the NuBus slots on older Macs, you can plug in accelerator cards that enable your Mac to do things bigger, better, and faster. You can get a plug-in accelerator for just about anything (except a PowerPC upgrade it seems). Examples of accelerators include: graphic accelerators, which can display more colours on bigger monitors; SCSI accelerators, which speed up file transfers; and video cards, which enable you to record full-screen, full-motion (30 frames per second or more) video on your Mac. Needless to say, if you don't have an accelerator plugged into your Mac, then you don't need this Extension installed in your System folder.

Plugged in

COLOR IT!

Q *When I was investigating* Color It! *on your Cover CD (MACFORMAT 31) on my LC475, I discovered that some of the plug-ins didn't work. Further investigation with* MacTools *showed that the files in question had damaged resource forks. Reinstalling* Color It! *from the CD didn't help. Am I doing something wrong?*
Andrew D Burns
Fife, Scotland

A No, this is not your fault, it's ours. Somewhere between making the master CD in the office and the pressing of the Cover CDs, some of the *Color It!* plug-in files were damaged. Please accept our humble apologies (grovel, grovel etc), and to make amends, we've put the plug-ins on this issue's Cover CD.

Apple what?

MISC

Q *I own a Performa 450 with 4Mb of RAM. I don't normally use virtual memory, and have 32-bit addressing turned on. I have three problems:*
1. When I try loading some applications or games, a message comes up saying that there was an error loading the Apple Event Handlers, or Apple Event Handlers not available. What in the world are Apple Event Handlers?
2. I have an external microphone connected to my Mac but it doesn't seem to recognise it. In the Sound Control Panel, it just says 'no sound input device'. Would getting System 7.5 help? The microphone used to work until I had the motherboard replaced by Dixons, who originally sold me the Mac.
3. Color It! *doesn't load on my Mac. First it says something like there's too much memory allocated to it, then the registration*

Continued on next page

PLUG-INS
Many applications use plug-in features which are not available within the main program. Plug-ins are like mini programs that enable an application to do more things – just as Extensions do for your Mac's OS.

MOTHERBOARD
Inside your Mac is a big flat square green thing with lots of computer chips on it. This is your Mac's motherboard. Please don't touch it – it breaks really easily.

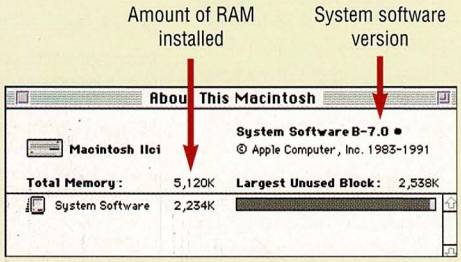
The wireless office network

The do-it-yourself problem solving guide...

One of the most common causes of problems on the Mac are Extensions or Control Panels clashing in your System Folder. It's easy to check if this is the case. Restart your Mac and hold down **[shift]**. Release the key when you get the message, 'Welcome to Macintosh. Extensions off.' If everything works, then the problem lies in your System Folder. The only way to work out which item is the culprit is by trial and error. Remove a few Extensions and/or Control Panels, then restart your Mac, without holding **[shift]** down. Keep on doing this until the problem no longer occurs and you've found the offending software.

If this doesn't work, try rebuilding your Desktop. Start up your Mac holding down **[command]** and **[option]**. You'll get a message asking if you want to rebuild the Desktop. Click **OK**, wait for it to finish rebuilding your Desktop, and see if this solves your problem.

If you're still stuck, use the form below to write to us. We'll need to know a few facts about your Mac, so when you're in the Finder, select About This Macintosh from the Apple Menu. The picture (left) shows what we need to know.



SAY AGAIN?

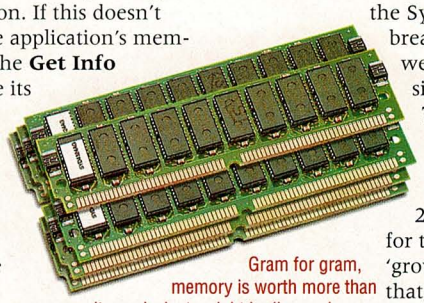
EtherNet and LocalTalk are two different connection protocols your Mac can use to talk to other Macs and printers. LocalTalk is the standard issue connection, but most Macs these days come with a built in EtherNet port which is 3-4 times faster than LocalTalk.

dialogue box comes up saying 'Error -108', which I have discovered means there isn't enough memory. I have tried increasing its memory and using virtual memory. Help!
Steven Amani
via e-mail

A1. Apple Events are messages passed between your Mac's Operating System and the applications you run on it. An Apple Event Handler is a bit of program code that sends and receives these messages. Without these, your Mac's OS won't be able to 'communicate' with an application, and it simply won't have that sort of thing. This would seem to be a problem with the particular applications you are trying to use, but it could also be a memory problem. Try disabling your Extensions (by holding down **[shift]** during startup), and then running the applications in question. If this doesn't work, reduce the application's memory partition in the **Get Info** box to just above its minimum requirement.

2. Sounds like you need to tweak your System to get your Mac to recognise the microphone again. Normally, you could try reinstalling the System software, but Performas don't come with System disks. If you made a backup of the hard disk when you got your Mac, you could try reinstalling the System Folder from that. If this doesn't work, get in touch with the branch of Dixons who replaced the motherboard for you and complain bitterly. It's an Apple motherboard, and Dixons are Apple Authorised resellers, so it's their responsibility to make sure your Mac is in full working order. Don't let them charge you for this repair – they should have got it right the first time.

3. You don't have enough RAM to give to *Color It!* without making life difficult for your Mac's Operating System. The 'Error -108' message is coming from your Mac's OS – it has tried to load something it needed and run out of RAM. Cut down the amount of RAM your System needs by disabling as many Extensions as possible – either by dragging them out of the Extensions folder or by holding down **[shift]** during startup. When giving *Color It!* more memory, remember that the System needs a bit of breathing space as well. It should be possible to run System 7.1 in just under 1.5Mb of RAM, but you should always try to leave at least 200K of RAM free for the System to 'grow' into. Having said that, *Color It! 2.3.5* won't work with less than 1.2Mb of free RAM allocated to it, so you're on the proverbial ropes. You may want to consider laying out some cash for a RAM upgrade. **MF**



Gram for gram, memory is worth more than its equivalent weight in diamonds, so using what you've got more efficiently is crucial. See 'Apple what?'

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Name .....

Address .....

.....

.....

.....

Your Mac
(For example, Performa 200, IIfx, PowerBook 145):

.....

System version
(see **About This Macintosh** screenshot above): .....

Amount of RAM
(see **About This Macintosh** screenshot above): .....

Are you using Virtual Memory? ..... **YES/NO**
(This is accessed from the Memory Control Panel under System 7)

Do you have 32-bit addressing turned on? ..... **YES/NO**
(This is accessed from the Memory Control Panel under System 7)

Details of any relevant hardware which could help us to answer your question:

.....

.....

Now, use this space to describe your problem or question. Please include as much relevant information as possible, and continue on a separate sheet if necessary.

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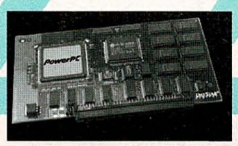

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Understanding AppleScript

Double-click on an icon like this, and an AppleScript script will perform its magic automatically. Easy, eh?

AppleScript is everywhere. Ever more applications are 'AppleScript-compliant', there's a developers' kit and it's part of System 7.5. Rod Lawton finds out more.

AppleScript is the 'universal' Mac scripting language. It works with most leading applications as well as your Mac's Finder, and it runs alongside applications, not within them, so it can be used on more than one program at the same time. You can use it to record or create sequences of actions as a mini-program that you can execute at will (like a macro), and you can also write scripts much as you'd write a program.

So, for example, you could use AppleScript to move a series of spreadsheet files from one folder to another, add a suffix to the filename, and then open them in *Excel* and save them as a single Workbook. You'd do this using commands directed first to the Finder, then to *Excel*.

If you have System 7.5, you can find examples of AppleScript in your **Apple** menu. You'll see an option for **Automated Tasks,** and a sub-menu with options for adding an alias to your **Apple** menu – turning sharing on and off and more. These are all AppleScript scripts that control the Finder. You'll find more of them in the Apple Extras folder on your hard disk – look for the AppleScript folder within it, and then the More Automated Tasks folder.

None of these scripts is especially complex. The Finder in System 7.5 is 'recordable', which means you can record your own series of actions and save it as a double-clickable script. In the AppleScript folder you'll see the Script Editor. Simply launch that, absorb the brief instructions, and click on the 'Record' button before carrying out your chosen actions.

There's much more to AppleScript, but that's a painless introduction. If you have an earlier version of the System, you'll need to get the AppleScript kit to write scripts (see the 'AppleScript Kit' panel over the page), but, providing you've got the AppleScript System Extension, you'll be able to run other people's. A warning, though – it's easy to write an AppleScript script that can erase, move or delete whole files and folders without warning, so don't run anyone else's script unless you know exactly what it does.

How does it work?

The key to it all is Apple Events. These are part of Apple's rather grand-sounding Open Scripting Architecture (OSA), their attempt to get all Mac software to talk the same language. This will mean you only have to learn one scripting language, which will work with all your applications.

You might find it easier to think of 'Apple Events' as 'commands'. You can send a command to launch an application, open a file or close a window – and all of these are 'Apple Events'. AppleScript scripts send these 'Events' to the target software. Obviously, the target software has to be able to understand these commands – Apple is keen for all new software to support AppleScript, OSA and Apple Events, which is gradually happening.

Commands and objects

Apple Events (or commands) don't work on their own; they need objects to act upon. These objects are Mac applications or the 'objects' they contain.

Objects are a key part of AppleScript, and once you've figured them out the whole thing becomes simpler to grasp. An object can fall into one of several categories: an application, in which case you can send commands to launch it or quit; one of the files in that application, in which case you can open it or print it; or a part of a document – so in the case of a text file it might be 'paragraph 1'. All these objects are 'nested' like directories and sub-directories, and 'paragraph 1' will 'belong' to a certain file, which itself 'belongs' to a certain application. So you can refer to this particular object in an AppleScript script as 'paragraph 1 of file "Article" of application "Word"'. Objects can have 'elements' too, so you could also refer to 'word 3 of paragraph 1'. By zeroing in progressively you can identify the tiniest detail in a file, then send a command to do something with it.

Apart from commands (which carry out actions) and objects (which the commands carry out these actions on), AppleScript supports programming constructions like **if... else** constructs, **repeat... until** loops, sub-routines, variables and all the other control structures you find in a standard programming language. Its closest relative

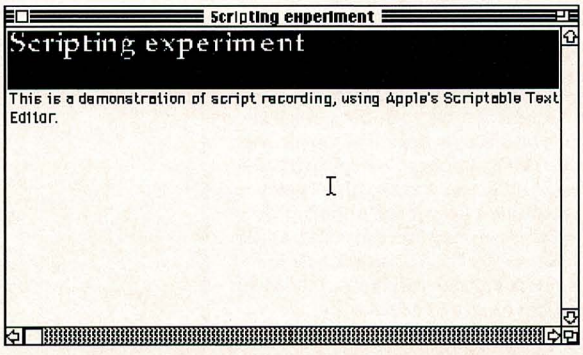
THAT'S CLEVER

AppleScript works differently from ordinary macro recorders. These can only record the position of mouse-clicks and chosen menu items. AppleScript communicates with the application to record the objects you click on, not just the location. And it ignores mouse or keyboard actions that have no significant effect.

Continued on next page

```
                                                    This section 'types' the
                                                    words into the document
                    tell application "Scriptable Text Editor"
                        activate
                        set selection to "Scripting experiment"
The 'first 'tell'
statement
identifies the
object the
following
instructions
are to be sent
to. The second
'tell' statement
ends the list
                        This is a demonstration of script recording, using Apple's Scriptable Text
                        Editor."
                        select text from character 1 to character 22 of document 1
                        set font of selection to "Palatino"
                        set style of selection to bold
                        set size of selection to 24
                        save document 1 in file "Hard Disk 40:Desktop Folder:Scripting experiment"
                    end tell
                                                    This section applies styles
                                                    to the selected text
```

Here's a real AppleScript script, created using the Scriptable Text Editor, supplied alongside AppleScript. The significant constructions and commands are picked out so that you can see how it fits together. This is only a very basic example.


Scripting experiment
Scripting experiment
This is a demonstration of script recording, using Apple's Scriptable Text Editor.

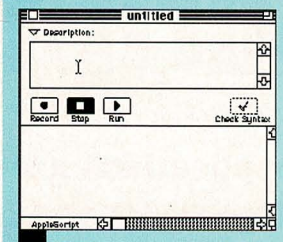
The script launches the Scriptable Text Editor, types some text into the document window, styles it up and then saves the document. This is only a very simple script. It would be easy to alter it, for example, to ask you to choose a filename to save it under, or to choose a heading size for the title.

TOO HARD

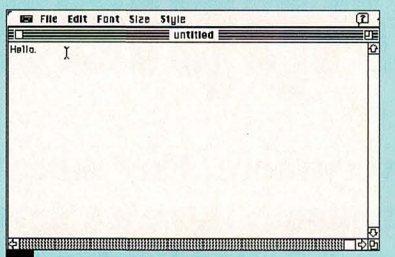
You've got AppleScript, you've got a scriptable application, so what's stopping you? Perhaps it's the minimal documentation that's supplied with it, in the form of an on-line dictionary. It's like trying to learn German from your German-English dictionary. Meanwhile, Apple's documentation is precise, but difficult to follow. Apple et al had better figure something out between them, or AppleScript will become a high-end, minority-interest programmers' tool.

USING THE SCRIPT EDITOR

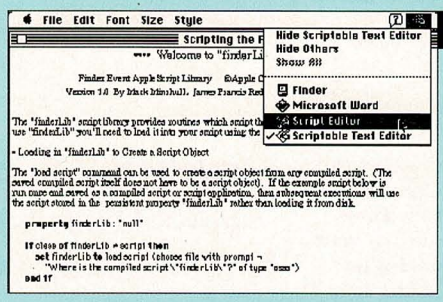
The Script Editor is where you write your AppleScript routines. You can also record routines, providing you're working with a 'recordable' application. Thoughtfully, Apple provide one, in the form of the imaginatively-named Scriptable Text Editor. As well as the Record, Stop and Play buttons, there is also a Check Syntax button which makes sure any raw code you write is 'legal' before you try to run it. The Script Editor also has various debugging and developing options to make scripting easier, but we'll leave those for another time. Follow the tutorial to find out how to record a sequence of actions in the Scriptable Text Editor.



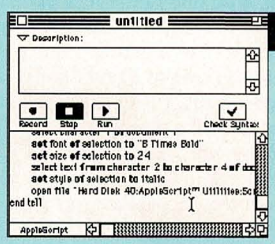
1 First you open a new Script Editor Window. Instead of starting to write raw AppleScript code, you simply click on the **Record** button...



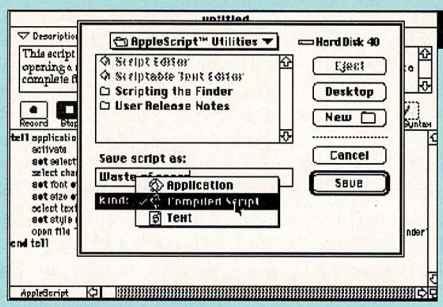
2 A cassette icon then flashes in the top left-hand corner of the screen to indicate that you're actively recording. Launch the Scriptable Text Editor and write something profound and moving. 'Hello' perhaps.



3 You can also carry out any of the Scriptable Text Editor's menu options. Here we've loaded the documentation file for the System 7 scripting library. When you've finished your sequence of actions in the Scriptable Text Editor, switch back to the Script Editor.



4 The Script Editor has been very busy, not only recording all of your actions, but also converting them into proper AppleScript code. When you click on the **Stop** button, the recording is finished.



5 Now you can save your script in one of three forms: as plain text (you can load and edit this later); as a complied script (which can be loaded by other scripts as a sort of 'library'); or as an application (a standalone routine), which you can then activate by double-clicking on it.

DON'T GET ATTACHED

One of the most exciting prospects offered by AppleScript is the ability to attach scripts to menu items or dialogues, to customise and enhance your applications' features. But as yet few software publishers are building this kind of AppleScript compliance into their programs. Why not?

is *HyperCard's* HyperTalk, but anyone with a knowledge of a high-level programming language won't find it hard to figure out.

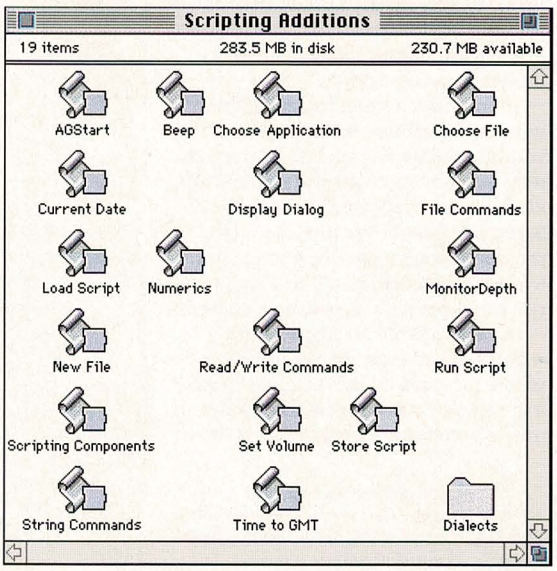
Bags of suites

Most programming languages have a single vocabulary. While AppleScript has a vocabulary of its own, it consists of only five commands. These commands work on whatever application you're controlling, but there is only so much you can do with **Copy**, **Count**, **Get**, **Run and Set**. What happens is that each AppleScript-compliant application you control has its own list of commands and objects in addition to these five commands. AppleScript is a modular programming language, and the modules available at any one time depend on the applications you're controlling. These language modules are called 'suites'.

Some software supports a far greater number of Apple Events and discrete objects than other software – it's to do with how old the software is, how powerful it is and what it does. What it does is particularly important: there are Apple Events based on text handling that wouldn't apply to an art package, while a word processing package would have a tough time making sense of graphics-handling commands. 'Suites' enable collections of broadly-related Apple Events to be kept together. Different software can elect to support different suites.

Two basic suites are the Required Suite and the Standard Suite. The Required Suite is the rock-bottom standard – almost any piece of software running under System 7 has to support the Required Suite. It contains just four, basic Apple Events: you can launch and quit applications with a script, and open and print files. The Standard Suite contains more Apple Events and you can do some useful things, like deleting and copying objects, checking to see if they exist, counting things (words, paragraphs, open windows...), creating and moving objects and saving files.

Beyond these two suites, there are many more specialised suites aimed at broad areas of activity. There is a Text Suite (which offers lots of text-handling tools), a QuickDraw Graphics



These are the scripting additions you get with a new (System 7.5) PowerMac – all the files you get with the AppleScript kit, plus a few extras. You can expect even more as time goes by.

APPLESCRIPT KIT

If you are interested in AppleScript programming, but don't have System 7.5, you won't get far without the AppleScript Software Developers Toolkit. This provides you with the AppleScript language, System Extension and Script Editor, plus the FaceSpan Interface Processor, which enables you to design proper interfaces for your scripts. You also get documentation, including: *AppleScript Language Guide; Building Interfaces for AppleScript; AppleScript Scripting Additions Guide; Getting Started with AppleScript; Guide to Scriptable Applications.* And if you want to distribute your scripts, there's a redistribution licence for AppleScript System software and FaceSpan runtime code. The AppleScript Software Developers Toolkit 1.1 is available for £84.60 (plus £7.50 for next day delivery) from Full Moon Software Distribution Ltd on 01628 660242.

MAC REQUIREMENTS

AppleScript will run on any Mac with System 7 or above, but it gets more complicated if you want to script the Finder itself – which is arguably the main use for AppleScript. There are basically three scenarios:

You have System 7.0
In this case, you have only limited Finder scripting ability. You can't script the Finder in the normal way, since it doesn't have conventional suites. Instead, you are supplied with a library or 'script object' which you can load into your scripts. This provides commands for controlling the Finder. You will need the Developers' Kit for the Script Editor and the AppleScript Extension.

You have System 7.1 but the wrong Finder
Well, we're getting warmer. The AppleScript kit comes with a Finder update. You need to use the Custom Install option to update your Finder and install the necessary software.

You have a version later than System 7.1.1 (including 7.5)
The Finder scripting software is built in and AppleScript is a standard System Extension. In System 7.5's Apple Extras folder you'll find the AppleScript Script Editor, some ready-made scripts for automating routine Finder activities, and a useful beginners' guide to scripting the Finder. You don't need the whole AppleScript kit, but it does contain useful documentation and the FaceSpan interface development kit, which enables you to design proper interfaces for your scripts.

Apple's AppleScript kit provides much-needed documentation and the *FaceSpan* interface-builder for more ambitious projects.

ENTER AT YOUR PERIL

Imagine a piece of software that anyone can use and program with, which can move, rename and trash files, with or without warning, in the twinkling of a hard disk light. Imagine AppleScript. Imagine a powerful monster let loose on an unsuspecting world.

You could do it out of stupidity, spite, or simply by mistake. You could wipe out the contents of your hard drive by nominating the wrong folder. You could 'lose' a file forever by renaming it unwittingly. And you could do them to someone else just by lending them a script.

AppleScript has the nightmarish disaster-potential of *ResEdit*. We're all used to software that makes doubly sure we want to delete file X and we really do want to empty the Wastebasket. The only way a file gets moved or renamed is if you do it. AppleScript can offer these safeguards, but only if you write them in. AppleScript is putting dangerous, low-level programming power into the hands of us amateurs. And you don't necessarily have to do any programming to wipe out your work – it's just as easy to record a disaster happening, save it, and run it again and again.

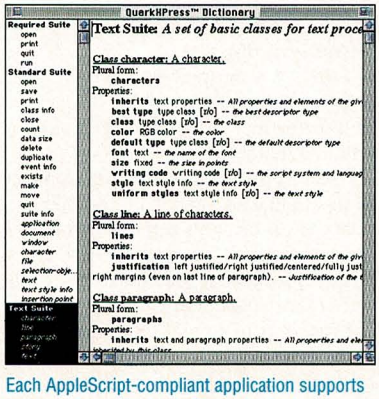
Advice

1. Be extremely careful when scripting your Finder, particularly when moving, renaming or deleting files. Practice with 'blanks' until your script is 100% bug-free.
2. Never run someone else's script without examining it first. If you can't understand it, then you must decide whether you trust the person who wrote it. Commercial scripts are the exception to this.

Suite, a Table Suite (for spreadsheets) and a Finder Suite – arguably the most useful of the lot.

Increasingly, software developers are producing dedicated suites that match their programs – in addition to supporting the Required and Standard Suites and maybe other Apple-defined suites too. This means that you'll never get two bits of software sharing precisely the same suites. Luckily, every AppleScript-compliant program contains a dictionary of the Apple Events supported, and the AppleScript Script Editor can open these up and display them alongside the scripting window – an excellent on-line reference mechanism.

This may sound complicated, but using AppleScript is much easier than it seems. Although AppleScript support will be different from one program to the next, the language always works in the same way, and the commands (Apple Events) work in broadly similar fashions. And you're only likely to be scripting the applications that you personally use – it's not as if you've got to learn hundreds of different sets of suites.



Each AppleScript-compliant application supports a range of specific Apple Events 'suites'.

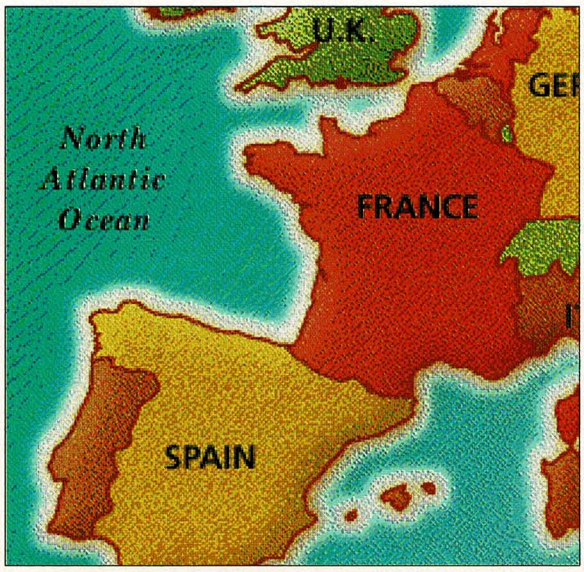
Scripting additions

The basic AppleScript language only has five commands, but can accept extra 'plug-in' commands, called scripting additions. Some are provided by Apple, others are written by third party developers, but they are all bolt-on routines that add a command or set of commands to the existing language. *HyperCard* users already know about XCMDs (eXternal CoMmanDs) and XFCNs (eXternal FunCtioNs) – additional HyperTalk commands that are attached to the existing language to extend its power. Scripting additions are the same thing. AppleScript comes with several – some additions offer only one extra command, others offer several related additional commands.

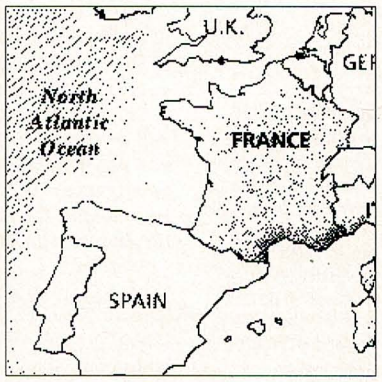
Scripting additions aren't like suites. Suites are associated with specific applications that work with AppleScript, whereas scripting additions work with the AppleScript language itself, so they're available whatever application you're working with.

You get a range of scripting additions with the AppleScript kit and with System 7.5, including:

- Beep – perhaps obviously, this makes your Mac go beep.



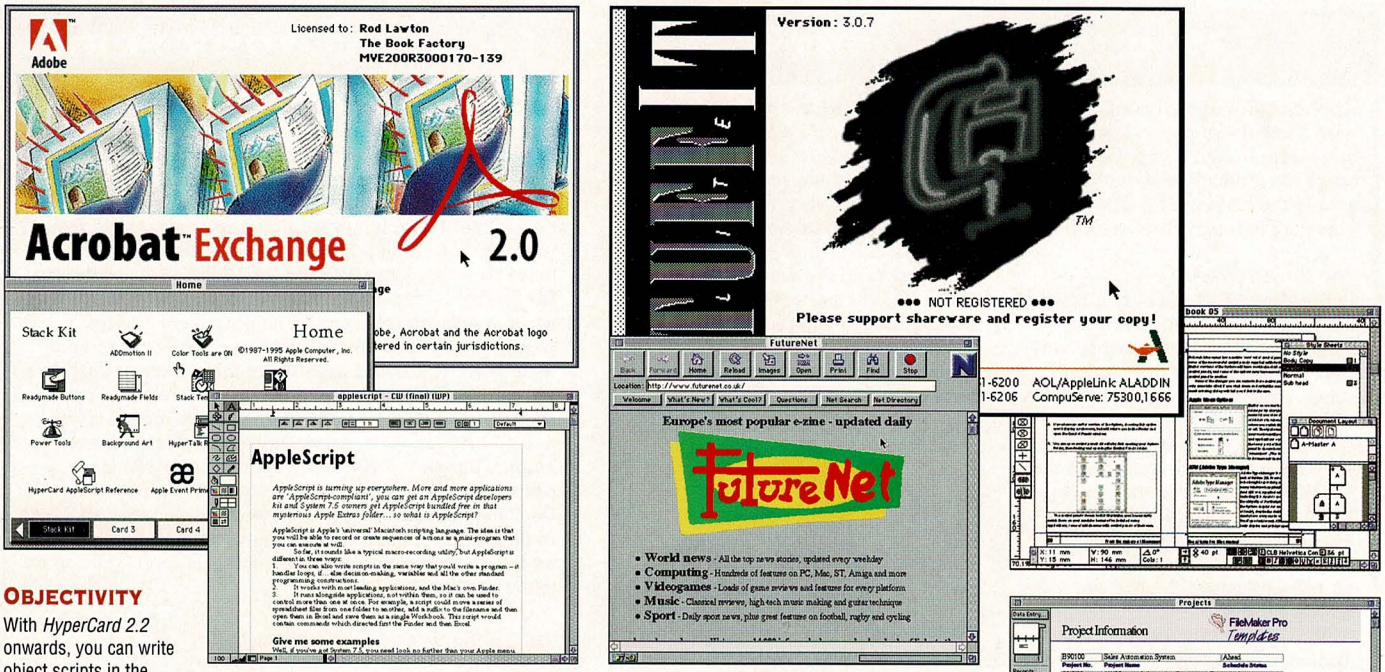
Using AppleScript you could write a script that made your graphics software automatically convert a list of colour PICTs to mono, without you lifting a finger.



READY STEADY

System 7.5 owners are supplied with ready-made scripts that can turn sound and file sharing on and off, make an alias and put it in the **Apple Menu Items** folder and more. It's easy to record your own scripts too.

Continued on next page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FileMaker Pro Templates

Acrobat, ClarisWorks 4, Netscape... most new Macintosh applications are AppleScript-compliant. This means that software developers can provide additional automated features and add-ons although, annoyingly, few applications enable you to record your own scripts, much less attach them.

OBJECTIVITY

With *HyperCard 2.2* onwards, you can write object scripts in the standard built-in HyperTalk language, or in AppleScript – which enables you to interface directly with external applications.

A GOOD REFERENCE

Finding out how to name an object (a piece of text, or a graphic, say) in an application can be tricky – the right syntax is essential. With some applications, though, you can 'copy' the object, swap to the Script Editor and carry out a 'paste reference', which inserts the correct object reference straight into your script.

INTERFACING

The FaceSpan application that comes with the Developers' Kit enables you to build complex AppleScript projects with professional-looking interfaces. It doesn't offer any short cuts to AppleScript programming, though.

- Choose Application – displays a dialogue for selecting an application and returning its full pathname.
- Choose File – as above, but for files.
- Current Date – returns current date.
- Display Dialog – enables you to create custom dialogues.
- File Commands – four useful commands, including one that lists the contents of a folder.
- Load Script – loads an external compiled script into the current one. In another language you'd call this using a library.
- New File – enables you to create a new file.
- Numerics – enables you to create random numbers, and round numbers to the nearest integer.
- Read/Write commands – various low-level and slightly terrifying file-handling commands that could easily go wrong and ruin your day.
- Run Script – enables you to run one script from within another.
- Scripting Components – returns a list of the scripting components currently available.
- Store Script – this stores a script object in a file.
- String Commands – enables you to convert characters to ASCII values and vice versa, and determine the position of a string inside a larger string.
- Time to GMT – returns the difference between current time and GMT.

Some of these scripting additions will be central to almost everything you do, while others appear only marginally more useful than a chocolate teapot – but they are all provided with the AppleScript kit.

Three kinds of support

There are three ways applications can work using Apple Events: they can be scriptable, recordable and attachable. Scriptable applications are the most common. Quite simply, they respond to scripts that you write. This is useful when you want them to do things for you, but you need to know a bit about the language and the suites that come with the particular application you're working on.

A recordable application doesn't necessarily involve such an in-depth understanding of the language. With the Script Editor in Record mode, you can carry out a sequence of actions in a recordable application. While you're doing this, the Script Editor records the Apple Events that will make that sequence take place again. When you've finished recording, you save your script; then, when you run it at a later date, your sequence of actions is repeated automatically.

If you're still learning the language, recordable applications are great for helping you understand how to use AppleScript (especially as the documentation usually provided is as clear as mud). You can carry out a sequence of actions with the Script Recorder running, stop the Recorder, then examine the AppleScript code that has been automatically generated, and meanwhile learn more about the way scripts work.

Most AppleScript-compliant applications simply respond to commands in a script – you activate the script manually. Attachable applications, however, can have scripts attached to menu items, fields, buttons and other objects. When you select one of these items, an AppleScript script is automatically activated.

Attachable applications are quite rare and are the most interesting. You can make menu items, dialogue options and objects within the program carry out their normal functions as well as trigger a whole range of new functions. So you could add a script to an application's **Save** option that automatically saves a backup of the previous version on an external drive, or in a special folder for backups. Or you could link a spreadsheet's **Recalculate** function to a script that updates figures in a report generated by word processing software.

The following list is a selection of AppleScript-compliant programs:

- *StuffIt Deluxe 3.0.1* and *StuffIt Lite 3* (both scriptable and recordable)
- *HyperCard 2.2* onwards (scriptable and attachable)
- *Cirrus 2.0* (scriptable, recordable and attachable)
- *QuicKeys 3.08* (scriptable and attachable)
- *MacWrite Pro 1.5* (scriptable)
- *FileMaker Pro 2* (scriptable)
- *Excel 5* (scriptable, recordable and attachable)
- *Word 6* (scriptable and recordable)
- *QuarkXPress* from version 3.2 onwards (scriptable)
- *THINK C 6* (scriptable)
- C++ (scriptable)
- *WordPerfect 3* (scriptable, recordable and attachable)

Most AppleScript-compliant applications are just scriptable, but as AppleScript takes off, you can expect to see more recordable applications (for beginners) and more attachable ones (offering more potential). AppleScript has the makings of a great tool, but needs to be used carefully – so watch out for in-depth tutorials in future issues of MACFORMAT. **MF**

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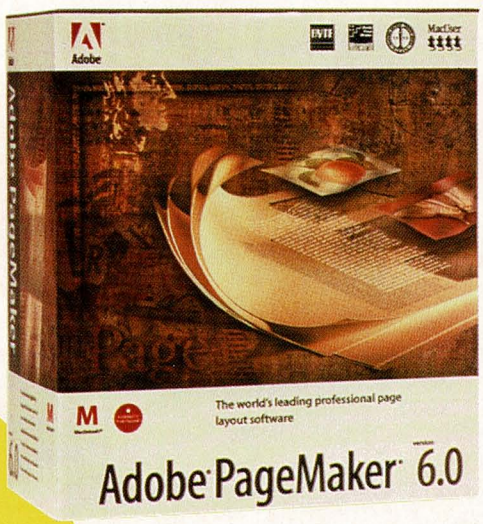

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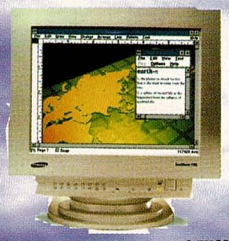

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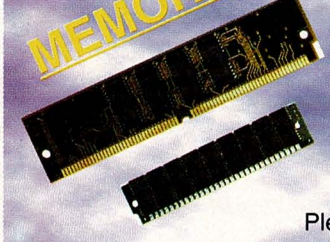

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FreeHand 5.5

The latest version of *FreeHand* promises improved text-handling, support for *Photoshop* plug-ins and tidied up features. Alistair Dabbs looks interested.

IT'S WAR

FreeHand and its long-time rival, *Adobe Illustrator* (£564) usually take turns in being the 'better' vector art package for the professional. *FreeHand 5.5* may only be in the lead until *Illustrator 6* appears, but in the lead it currently is.

Macromedia have at last produced a version of *FreeHand* that is both fast and furious. Clearly the version number is no more than a dig at *Adobe Illustrator* (which is also currently at 5.5, although version 6 is imminent), but this time round *FreeHand* really deserves the jump. In fact, in just about every respect, *FreeHand* is the superior program.

Perhaps the most important change for graphic designers is *FreeHand 5.5's* much improved handling of text. This won't matter too much if you're a pure artist, but if you're involved in layout, logos and promotional material you'll have found that previous versions of *FreeHand* forced you to waste time working around the typographical control interface. This time you really can simply click and get going, without having to keep reverting to the **Tool** palette. Many standard type effects – such as leading and kerning – are instantly accessible from within the floating **Inspector** palette.

Using the **[command]**, **[option]** and **[shift]** keys in combination you can drag out fixed or auto-expanding text blocks, constraining width or height if you wish. Any running text can, of course, be edited in-line rather than in a dialogue, although for long multicolumn strings of text the Text Editor is recommended. Notably, the irritating way in which clicking somewhere with the Text tool always created a new text block whether you used it or not has been cleaned up in this release. Far more than in any previous version of *FreeHand*, you feel in control of your on-screen type.

Fancy drop caps

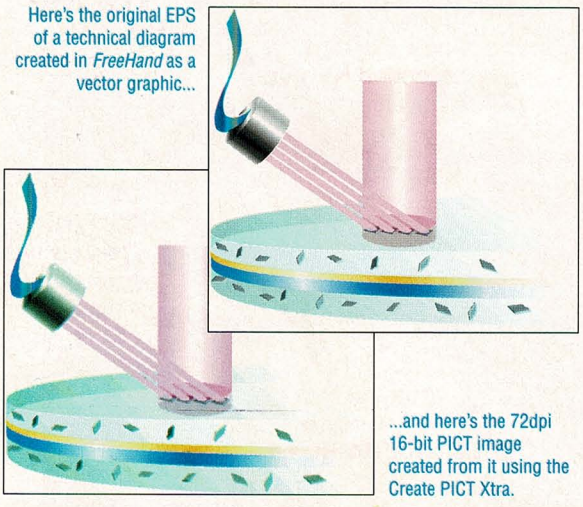
A nice touch is the way you can paste grouped vector or placed bitmap graphic elements into a text string. Once pasted in there, the graphic acts like any text character, responding to text controls (such as size and kerning) and reflowing accordingly, even along special paths. This feature makes effects such as fancy drop caps and small illustrations attached to glossary passages easy to set up. The only slight problem is that clicking on that paragraph's style name in the **Style** palette shrinks the graphic to the cap-height of the rest of the text, although the unlimited Undo facility can put right errors in an instant. Otherwise, you'll need to create new paragraph styles for each string that contains a graphic.

Photoshop plug-ins

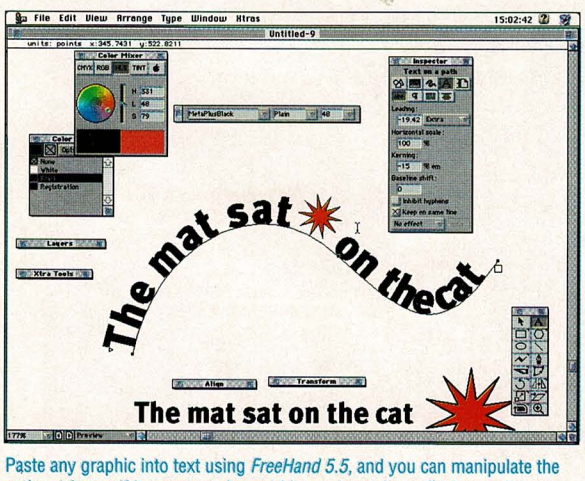
The other main addition to *FreeHand* is its ability to support *Photoshop* plug-in filters for editing placed bitmaps, all of which are listed under the **Xtras** menu. This is a feature that will attract attention among prospective buyers, but it has important limitations, the first of which is the memory requirement. Even when we gave *FreeHand* the allocation of RAM we'd normally give to *Photoshop*, we still experienced 'out of memory' errors when running certain filters, or placing more than two TIFFs into a single document.

FreeHand enables you to import entire TIFFs directly into a document or establish a link to the original file, which displays a preview on screen, keeping memory usage low. This is simplified further in this latest version

Here's the original EPS of a technical diagram created in *FreeHand* as a vector graphic...

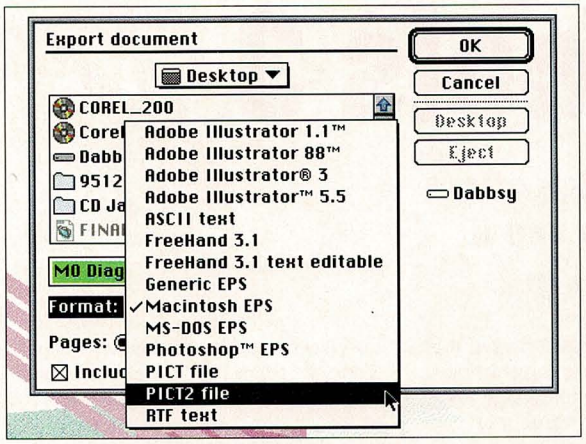


...and here's the 72dpi 16-bit PICT image created from it using the Create PICT Xtra.

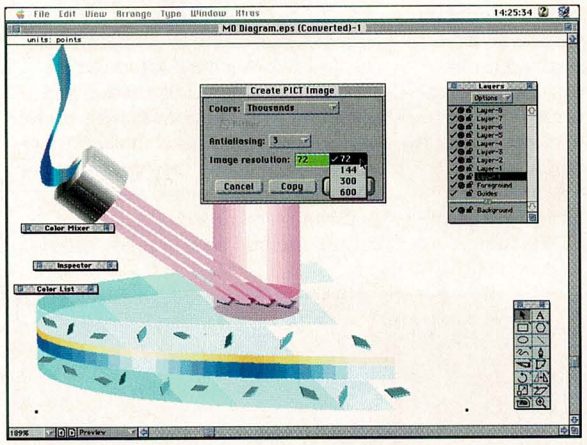


Paste any graphic into text using *FreeHand 5.5*, and you can manipulate the entire string as if it were text. A great idea and one that will trigger off many new layout possibilities. *FreeHand 5.5* is full of improvements like this.

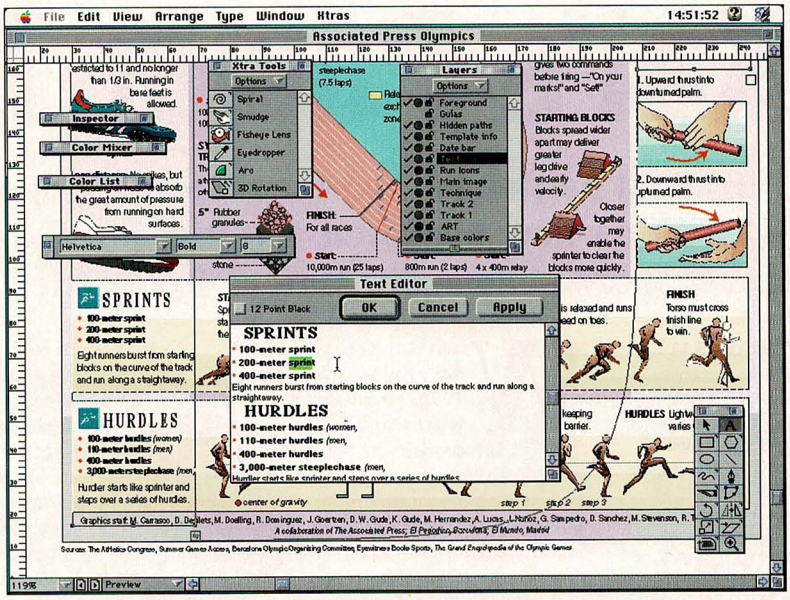
Photoshop plug-in support extends the boundaries... but you might have to extend your memory too if you fancy using the filters in anger. The **Extract** feature is fast, logical and uncomplicated.



Check out the list of file formats you can now export *FreeHand* images to. This puts *FreeHand* streets ahead of anything else in its field.



Create a smooth PICT version of your vector artwork in a flash. You can even control the resolution and pixel spread of the anti-aliasing. You'll need RAM by the bucketload if you want 300dpi 24-bit images, though.



Linked text blocks are indicated with clear, sweeping connect lines. Add to this the Text Editor and extensive typographical control, and you'd be forgiven for thinking you were using a DTP package. Well, for a minute, anyway.

by an **Extract** command in the **Inspector** palette, which enables you to turn an embedded TIFF into a link in one go without fiddling with the program preferences. Since each pass of a plug-in filter re-embeds the TIFF into the document, this **Extract** command is something you could end up doing over and over again.

Not all *Photoshop* filters work with *FreeHand* – a user-editable configuration file keeps track of incompatible plug-ins and disables them accordingly. However, finding out which of your legacy filters are and aren't compatible can be a matter of trial and error and, in our case, several Mac crashes.

However, the fine support for bitmap images doesn't stop there, as there is also a Create PICT Image Xtra, which can turn any vector or combination document into an antialiased 24-bit, high-res bitmap image. In practice, memory demands might limit you to generating 8-bit, screen-res (72dpi) PICTs, but if you're involved in creating electronic artwork for presentations, CD-ROM interfaces or World Wide Web pages, it's a real time-saving boon. In this respect, it ties in with *Macromedia Director* and *Authorware* extremely well.

If you intend to create bitmaps from vector images for re-editing in *Photoshop*, you can actually export your *FreeHand* documents into a *Photoshop*-compatible EPS format, which is basically a PostScript-clean *Illustrator* EPS. This gives you greater control over the vector-to-bitmap conversion when you're working within *Photoshop*.

You can also export *FreeHand* documents to a variety of other formats, including all previous *Adobe Illustrator* versions, plus a new improved *FreeHand* EPS with or without the original document embedded in the EPS. We say 'improved' because *FreeHand* EPSs always used to be huge affairs with picture previews (those you'd see when bringing the EPS into a DTP program, for example), which took a long long time to redraw. Now, *FreeHand* EPSs are at very most 8% bigger than equivalent EPSs created with *Adobe Illustrator*, and often the same size. The picture previews are better behaved, and considerably better looking than those in *Illustrator* EPSs.

Format heaven

One very useful feature in *FreeHand 5.5* is its ability to open up a large number of file formats directly from the **File Open** dialogue, without fuss or having to select any import filters. The program elegantly handled the conversion to TIFF from every bitmap format we threw at it, including PhotoCD. You can now also open up *Adobe Acrobat* files, literally as multi-page documents although without any annotations or thumbnails. This opens up a world of possibilities for exchanging graphic images across a common format: vector images embedded within *Acrobat* files can be opened up in *FreeHand* and re-edited and re-used as genuine *FreeHand* graphics.

If you left *FreeHand* alone after version 3, you really ought to try this latest release – you won't recognise it, so much has been improved. The only real gripes are that cropping placed graphics remains fantastically unintuitive, and you need lots of memory if you want to get serious. If *FreeHand* wins over converts from the *Illustrator* ranks, it deserves it. Current *FreeHand* users, and anyone looking to buy a professional art package in general, need look no further. **ALISTAIR DABBS**

MACROMEDIA FREEHAND 5.5

Price: £528.75, upgrade from version 5 £81.07, upgrade from earlier versions £151.57. **Out:** now.
Requires: LCII or better, 5Mb of RAM, System 7 or later, 13-inch 256 colour monitor, 12Mb of hard disk space, CD-ROM drive for install.
Contact: Macromedia on 01344 761111

FEATURES 85%
This is the finest ever *FreeHand*, although that doesn't mean there isn't room for improvement...

EASE OF USE 85%
The interface looks more compact, the tools work more intuitively and the whole program is faster than before.

DOCUMENTATION 80%
Same documentation as *FreeHand 5*, with the *5.5* updates on disc.

VALUE FOR MONEY 70%
These art programs just get better and better. Shame the price doesn't, but it's certainly not out of line.

MACFORMAT RATING 80%

Compare how the different packages represent your artwork in EPS picture previews. In the middle, the graphic as it looks on-screen in *FreeHand*. At the top, the ropy but essentially accurate colour rendition of *Adobe Illustrator's* EPS preview. Bottom, the high-quality but slightly off-colour EPS preview created by *FreeHand*.

Kai's Power Tools 3

The latest edition in the ever-radical *KPT* series offers yet another new, improved, intuitive interface and a less-is-more philosophy. Marcus Dyson tries it out.

WHAT IS IT?

If you're unfamiliar with any version of *KPT* (there must be at least two or three of you), the package is a set of filters, which, when placed in the Plug-ins folder of *Adobe Photoshop*, or any other plug-in compliant graphics package like *Color It!*, *PhotoFix* or *xRes*, enables them to do all sorts of stunning graphical trickery which they otherwise couldn't do.

When Kai Krause unveiled *Kai's Power Tools* in late 1992, he achieved what many had thought impossible: he improved *Photoshop*. *Kai's Power Tools* were a phenomenon. This powerful set of plug-in filters enabled even the most amateur *Photoshop* user to create effects which had previously been beyond the wildest dreams of the most experienced professional. *KPT* scored the elusive double of becoming not only one of the most used Mac graphics applications, but one of the most owned too.

Ten of the photos from the *Kai's Power Photos* collection are on the Cover CD

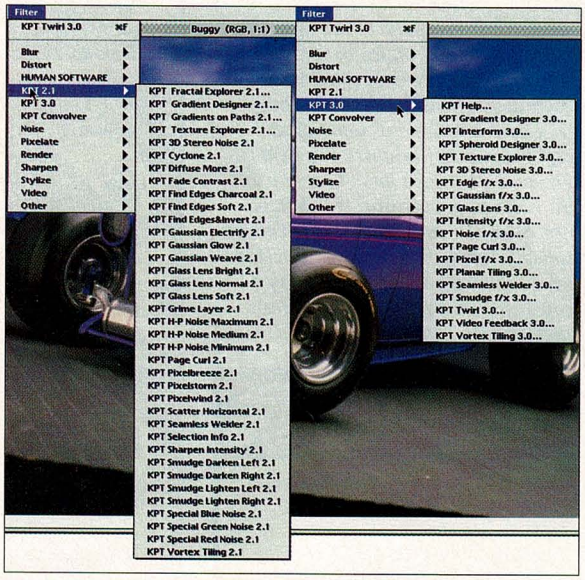
Users flocked to buy *KPT* (rather than just installing a mate's copy) because not only was it good, but it was damned good value too!

But in creating such a capable piece of software, Kai left himself with a considerable problem – how to get people to buy the next version. The tack taken by MetaTools (Kai's software company) with *KPT 2* was to improve the interface on all the filters in *KPT 1* and make them PowerMac compatible, which not all of them were.

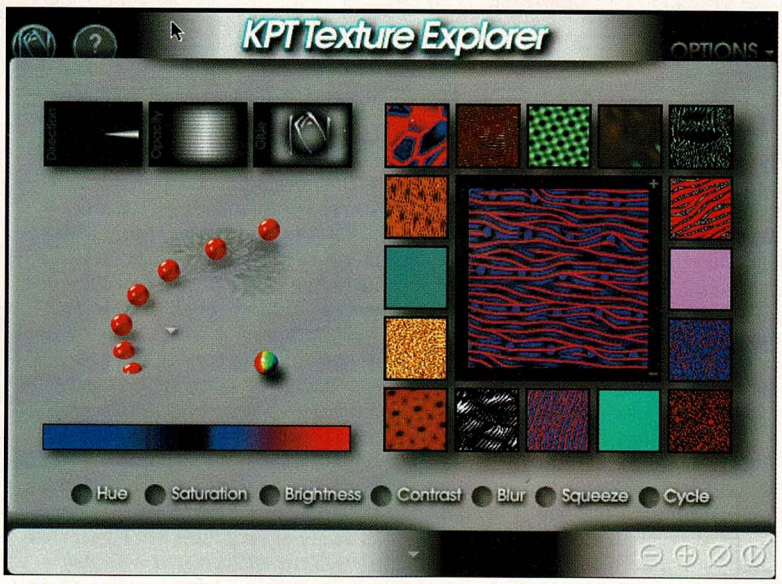
But with all the filters now working on PowerPC machines, and their interfaces suitably tweaked to Kai Krause's satisfaction, the same problem faced MetaTools with the release of *KPT 3*. This time, however, they took a very different route.

Spot the difference

Instead of tweaking every filter from the first two versions, *KPT 3* tweaks several, introduces a few more, and dispenses with many of the less useful ones completely. This is the best possible course of action they could have taken: *KPT 2* was loaded with filters that were rarely used, if at all, and its control method was, in many cases,



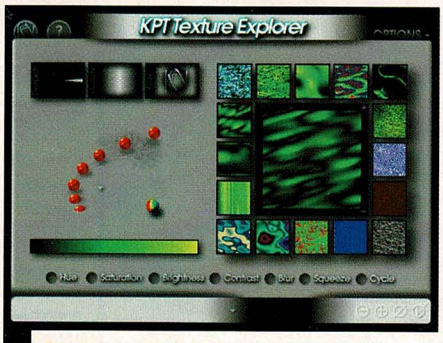
A quick look at the *KPT 3* menu next to that of *KPT 2.1* shows how the package has been trimmed back. This is very much a case of less is more.



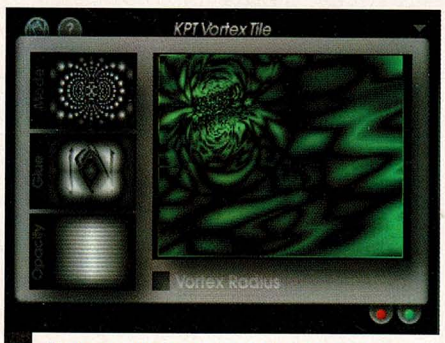
The Texture Explorer gets a new look and a few new features, but the main change from version 2.1 is that the textures are 'infinite', rather than repeating.

PLAY GOLF ON MARS WITH KPT 3 AND KAI'S POWER PHOTOS

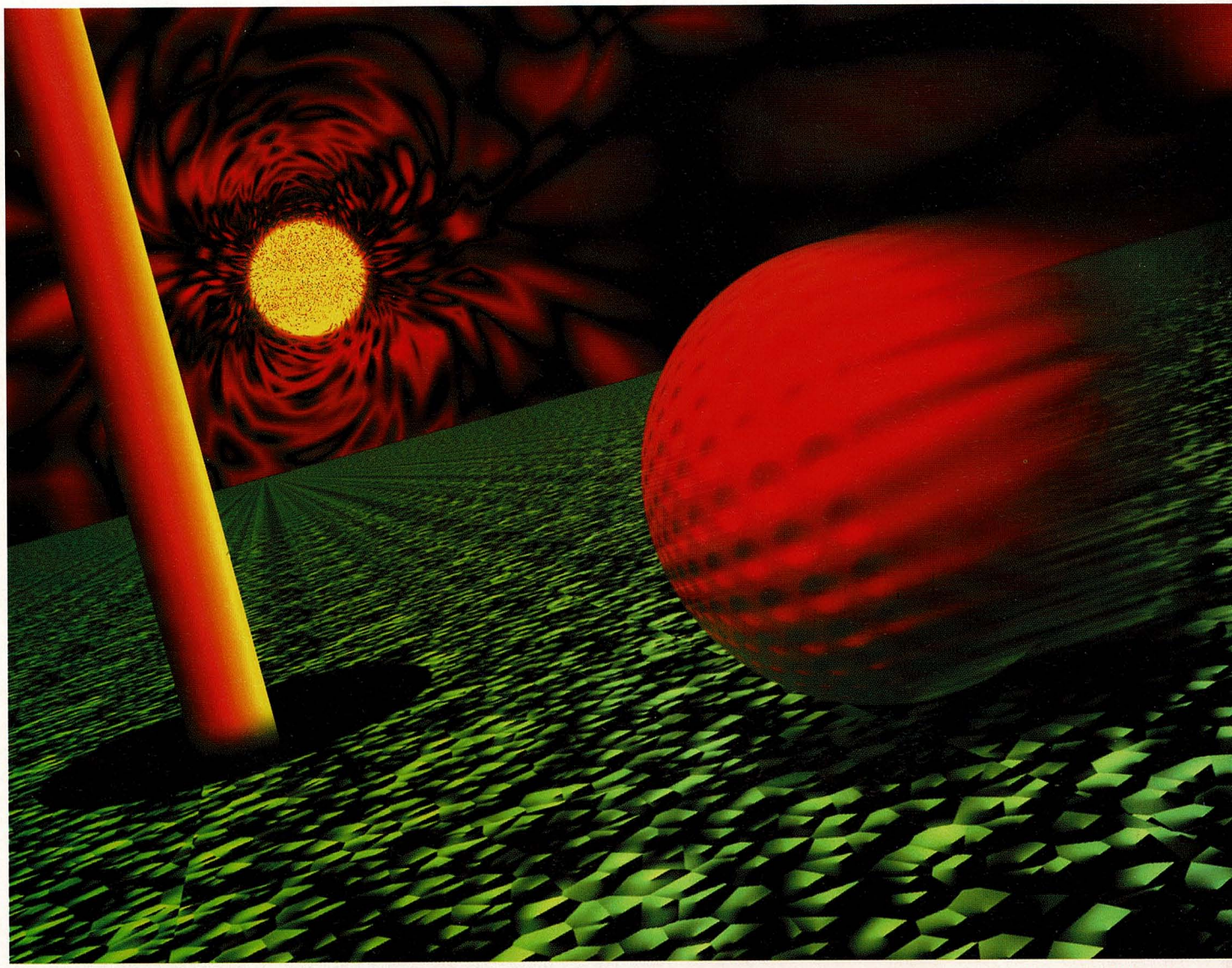
This image, prepared with *KPT 3* and stock photography from HSC software's *Kai's Power Photos*, shows what can be done quickly and easily with *KPT*. *Kai's Power Photos* are reasonably priced stock photography collections which feature startling images that have been well photographed (they rated 89% in MACFORMAT 28 and are available from our Reader Offers section on page 116). But the typical Kai style trick up their sleeve is the revolutionary Transflectance channels. These enable you (when working in a powerful image processor like *Photoshop*) to paste the image into a background photograph, while all the see-through bits of the image – car windows, for instance – retain their transparency.



1 First create a texture for the sky using the KPT Texture Explorer.



2 The largest window shows you the changes you make using the controls, as soon as you make them.



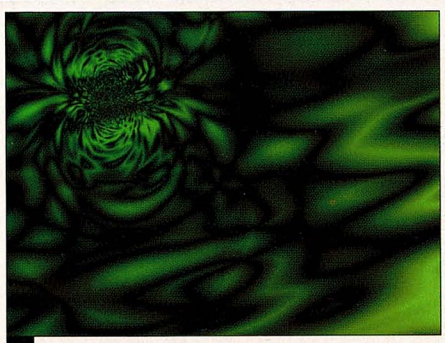
Follow the walkthrough below (on pages 88 to 90) to find out how this image was created. The final details were added here with *Photoshop's* standard Motion Blur and gradient tools.

fundamentally flawed. Kai's software has always aimed to present new and uniquely intuitive interfaces (see the cover feature, starting on page 39, for more information about his latest project). *KPT 2*, despite trying to offer something new and improved, failed because it actually required you to look at the manual while using it. For instance, the Page Curl feature in *KPT 2* required that you press a keypad number while applying the filter to dictate which corner it was applied to. Logical? Not exactly.

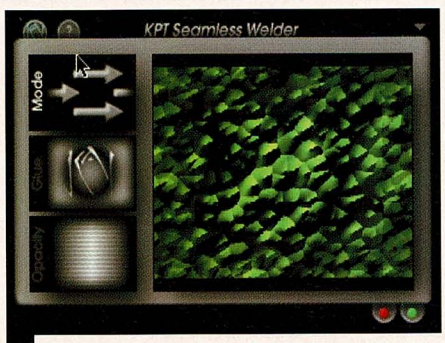
By contrast, *KPT 3* offers an easy-to-use, point-and-click menu window. This new, intuitive interface enables you to easily create stunning designs, but that must be balanced against the fact that, once again, you're having to learn to use the software all over again. Nevertheless, the interface used by *KPT 3* is a huge improvement over that of version 2.

KPT 3 offers enough new features to make it a worthwhile purchase even if you already own a previous version, but something about it isn't quite 'right'. For example, six of the items in the *KPT 3* menu take you to the same

Continued on next page



3 Here, you've used the Vortex Radius setting in the KPT Vortex Tiling filter to add turbulence to the sky.

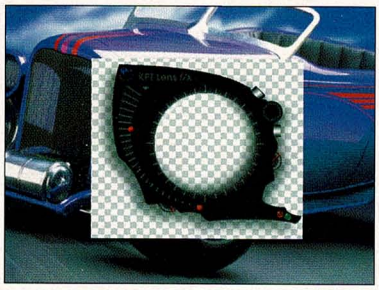


4 Now create another texture for the foreground, and use the seamless welder to make it repeat smoothly.

5 Use Planar Tiling to make the image repeat infinitely to a fake 'horizon'.

Continued on next page

Under certain circumstances when you're swapping between applications, *Kai's Power Tools* displays a worrying tendency not to redraw the screen correctly.



filter interface, and that interface is markedly different from all the others – which is inconsistent. Then there's the fact that two filters from *KPT 2.1* are included here, which makes *KPT 3* seem unsatisfying as a bundle.

Nevertheless, these are minor shortcomings and the latest version is more intuitive and easier to use. Ultimately, the *KPT* series enables you to create stunning images, and there's nothing else quite like it. **MF**

KPT Bryce

Kai's not only famous for his *Tools*. *KPT Bryce* is a virtual landscape generator, which you can use to create your own incredible VR worlds. It was reviewed back in MACFORMAT 20, where it scored 91%, and it costs £152 from Principal on 01706 832000. It is also available for £115 from MACFORMAT's Reader Offers on page 116.

KPT Convolver

Want to play around with your images some more? Try *KPT Convolver* – which enables you to tweak and adjust your images to your heart's content, using an intuitive and original interface. It's £152 from Principal, on 01706 832000, and it scored 90% in MACFORMAT 25.

KAI'S POWER TOOLS 3

Price: £151.57. **Out:** now.
Requires: any colour Mac (although new filters only work on PowerMacs), any image editing package that supports *Photoshop* plug-ins, and 2.5Mb more RAM than is required to run that software, System 7.1 or later, colour monitor.
Contact: MetaTools on 0181 744 9912.

FEATURES 72%
Not as many filters as previous versions, but almost all the important ones are here.

EASE OF USE 82%
The interface is more intuitive and easier to use, but you'll have to learn it all over again.

DOCUMENTATION 75%
As good as ever, but KPT software usually requires less explanation than this. Good on-line help.

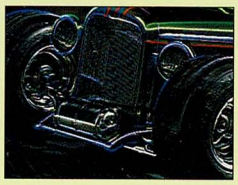
VALUE FOR MONEY 75%
Only buy it if you've eked every last iota of creativity out of *KPT 2*.

MACFORMAT RATING 77%

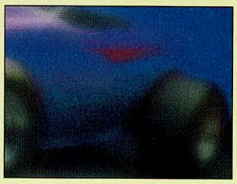
THE KAI OF THE BEHOLDER

Kai's Power Tools 3 can produce some weird and, in creative hands, wonderful effects. Here is a quick whistle-stop tour through the *KPT* toolbox – but remember, each of these images shows each filter being used in its crudest form. *KPT* enables you to tweak each and every aspect of each filter. Filters can be applied to an image with user-defined transparency, so that the original image will show through, and they can also be applied with image processing effects. All of these factors combine to make *KPT 3* a stunningly powerful and subtle tool. What you see in the images below is just the very beginning of a long road to graphics nirvana.

This is the original *KPT Power Photo* image, before any *KPT* effects were applied to it.

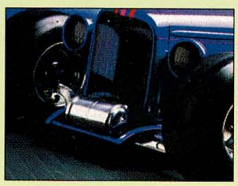


KPT Edge f/x applies the same kind of edge effects you can gain using *Photoshop's* standard filters.

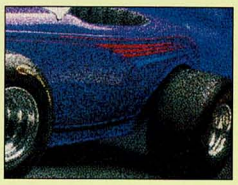


KPT Gaussian f/x is another *KPT 3* filter that merely sticks a pretty front end on an effect that is already simple to achieve in *Photoshop*.

KPT Glass lens offers dramatic distortions, but, unlike most *KPT 3* filters, is rather limited in its flexibility.

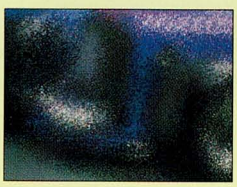


The KPT Intensity f/x can easily be achieved with *Photoshop's* **Brightness/Contrast** and **Hue/Saturation/Brightness** controls.



KPT Noise f/x... Surprise, surprise, another standard *Photoshop* filter front-ended with a pretty interface.

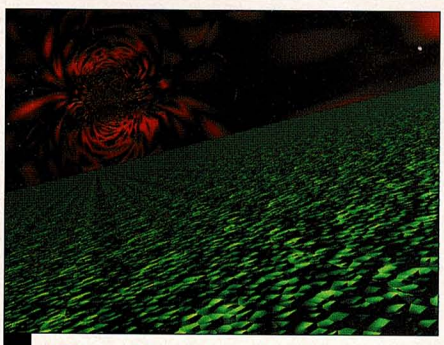
KPT Page Curl. At last, a *KPT* filter that is a considerable improvement on its version 2.1 counterpart. Page Curl is now intuitive and flexible, and as impressive as ever.



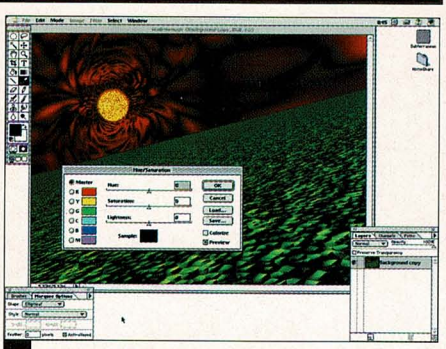
KPT Pixel f/x is a simple-to-use way of controlling diffusion patterns. It's effective, but limited in scope.

KPT Planar Tiling is one of the new and extremely useful features offered by version 3. It can either simply repeat and image in the x,y plane or, as shown here, create a stunning perspective effect.

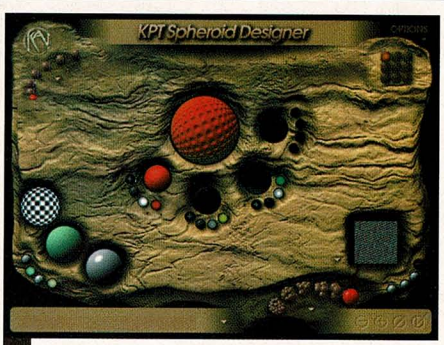
PLAY GOLF ON MARS WITH KPT 3



6 *KPT's* use of Transflectance channels means you can now just place the second texture on top of the first.



7 Use the HSB settings to create a sun in the centre of all the turbulence.



8 Use the KPT Spheroid Designer to create a golf ball. The Spheroid Designer is an immensely powerful tool which can add light sourcing, texture and pattern to a circle or ellipse to create extremely convincing 3D effects. See the main image on page 89 for the end result.

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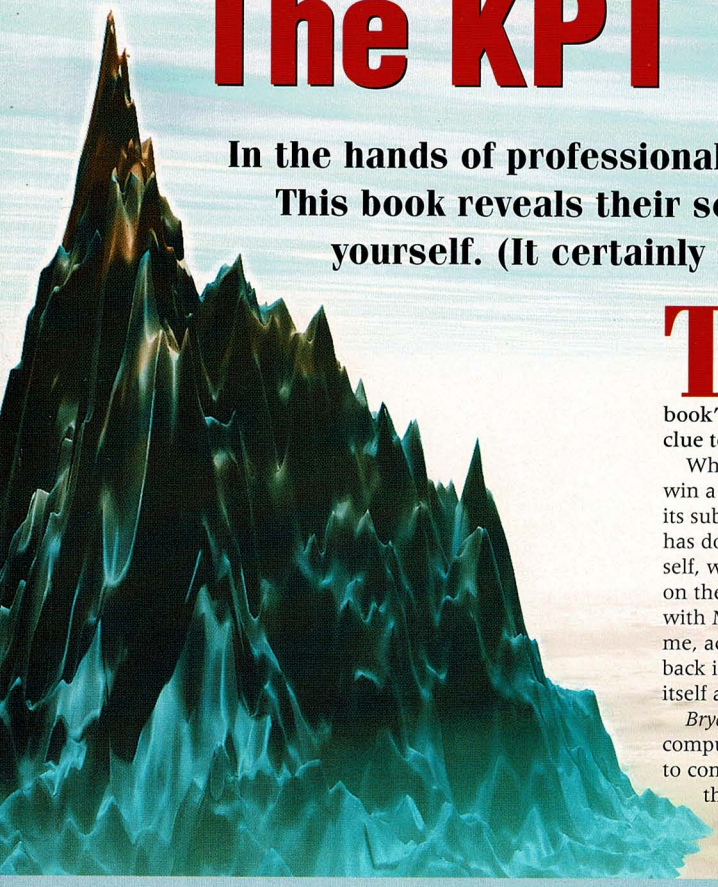
The KPT Bryce Book

In the hands of professionals, *KPT Bryce* can create masterpieces. This book reveals their secrets, and shows you how to do it yourself. (It certainly showed Derek Smith a few things.)



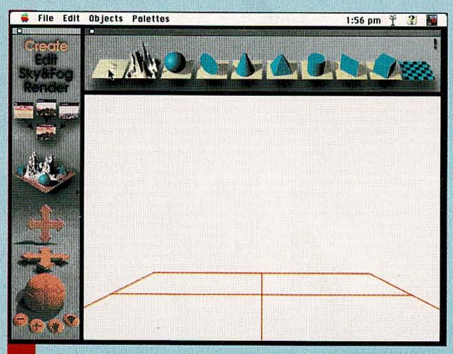
They say you should never judge a book by its cover, but the superbly rendered *Bryce* landscape on this book's cover certainly gives you a clue to the delights awaiting within.

While the book's name isn't going to win a Booker prize for inventiveness, its subject matter, *KPT Bryce*, certainly has done. So you could see for yourself, we featured a save-disabled demo on the bonus Cover CD given away with MACFORMAT 31, and we (well, me, actually) originally reviewed it back in MACFORMAT 20, where it scored itself a MACFORMAT Classic Award.

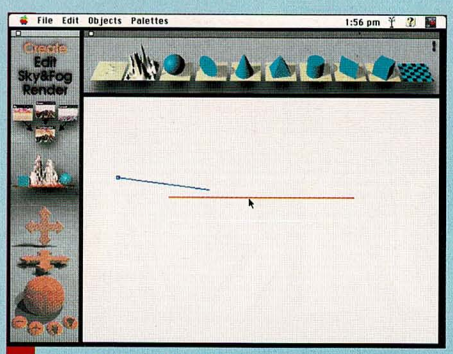
Bryce is one of the most enjoyable computer programs you're ever likely to come across – games included – and this book is a great excuse to use it again. It's also timely, because the program's somewhat inadequate manual is likely to have left you with myriad questions – it's confusing, lacks detail, and is mostly grey, which may lead you to surmise that it was written by a politician, but it fact the author was a certain Susan Kitchens, who's also the author of this book. This means that Susan's confusing style is once again in evidence, but this disadvantage is outweighed by her excellent knowledge of the program, plus her contacts and inside information.

Books about software packages face a dilemma. Should they be definitive and tell you everything about the program, repeating much of the manual, or should they assume you know the basics and concentrate on more advanced features? Many books of this type are shamelessly aimed at people

STILL WATERS RENDER DEEP



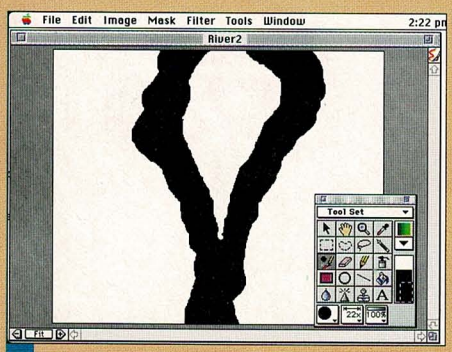
1 When creating a clear water effect, minor factors can make the difference between realism and disaster, so be prepared to spend some time. Create a ground by clicking the button on the left of the **Create** menu.



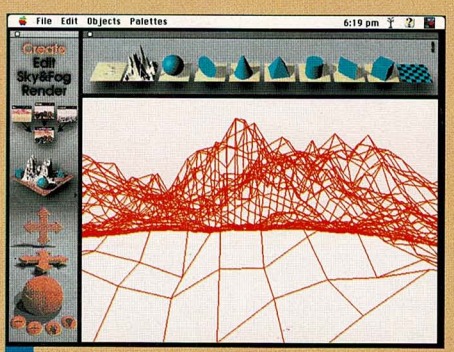
2 From the Materials Editor, give the ground a pebble effect. Next click the infinite plane object (the checkerboard) and give it a basic water effect material, then raise it up a little (from the side view).

3 Create a terrain or two, then add a stone effect. The next step is to make the water more transparent. To do this, select the Infinite plane, bring up the Materials Editor and click the **Details** button.

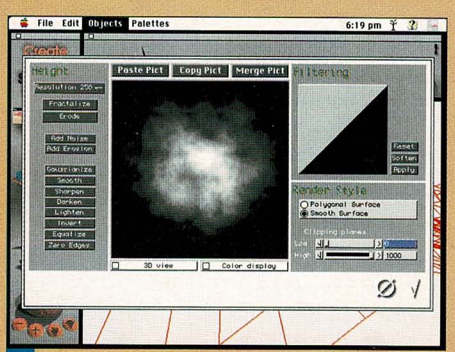
HOW TO CREATE YOUR OWN CUSTOM TERRAINS



1 Use a paint package to draw your terrain. White areas will be high, black areas low, and there will be shades of grey in between. In this case we're using pure black and white to generate sheer cliffs.



2 We're using *Color It! 2.3*, but most art programs have the following commands. From the **Edit** menu, choose **Select All**, then choose **Copy**. Open a new file in *Bryce* and create a ground and terrain.



3 Make sure the terrain is selected, then choose **Edit Terrain** from the **Objects** menu. This dialogue box enables you to manipulate terrains. Rather than manipulate our terrain, we'll completely replace it.

who have pirated the program from a mate at work and want a manual, offering little for more advanced users, but *The KPT Bryce Book* gets it just right. While it is comprehensive, it doesn't dwell on the basics. Indeed, it starts by telling you how to use the program more quickly and efficiently, assuming a certain level of familiarity. This is vital information when using a program that, thanks to its complex nature, runs so slowly.

Contents

Each chapter concentrates on a different specific area of *Bryce*, such as materials, sky and fog, achieving natural results, and rendering. The information is highly detailed – it reveals many secrets, and contains plenty for even the most competent *Bryce* user.

It emphasises the importance of perspective, offers techniques for using haze, details the complex lighting options, and leaves no stone unrendered – sorry, unturned. The last chapter is even a problem solving clinic for the more common *Bryce* ailments.

But perhaps the most important part of the book is not the book at all, but the accompanying CD. It's similar in content to the CD included with *Bryce* when you buy it, containing sample landscapes, extra materials, and tutorials referred to in the book. The sample landscapes are crucial because the best way to learn how to use *Bryce* is to see other's work, think 'how did they do that?', then open up the file and find out for yourself exactly how it was made.

This, however, points to one of the weaknesses of the book: it's too theoretical, with not enough real life walkthroughs. Indeed, its weaknesses are exactly those of the original manual, including the fact that there's little colour. The information could be clearer, and can be heavy reading – it often requires several attempts to understand some of the more useful pieces of information.

If you own a copy of *Bryce*, and are prepared to put in the time and effect required to produce greater results, then this book is definitely worth the price – you might even find the CD worth the price on its own. Together, they will answer all the questions you still have after reading the program's manual, and inspire you to create ever more complex and elaborate scenes.

Mind you, if you've just paid out £100 for a product, should you even be in the position of needing to buy another book to tell you how to fully use it? **MF**

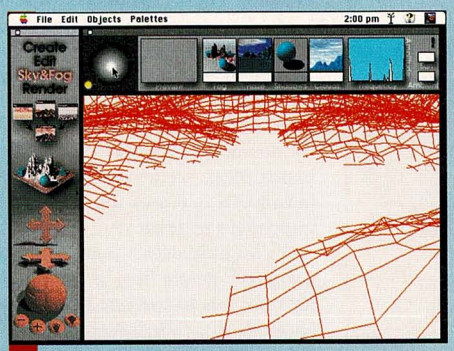
THE KPT BRYCE BOOK

Price: £29.95. **Out:** now.
By: Susan Kitchens
ISBN: 0-201-48355-6.
Contact: Addison Wesley on 01734 794000.

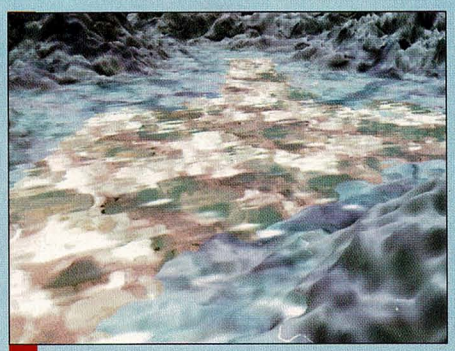
MACFORMAT RATING **88%**

SuperBryce is due for release in the very near future. It's not being marketed as an update for *Bryce*, but rather a professional version which will be sold on the shelf next to *Bryce*. Watch for our review.

4 Ambient is turned off – which means the water has no colour. Diffuse is set low to give a slight blue effect, Specular is maximum to give glint (so no need for Reflectivity), and Transmitivity is maximum to make it clear.

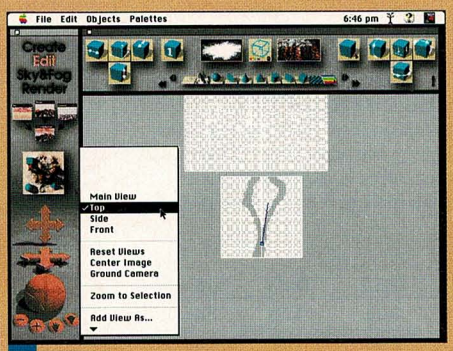


5 Small adjustments have major effects – try turning Refract too low to see for yourself. This is particularly true of the sun's position. Here we've opted for high noon. An early morning sun low in the sky gives more glint.

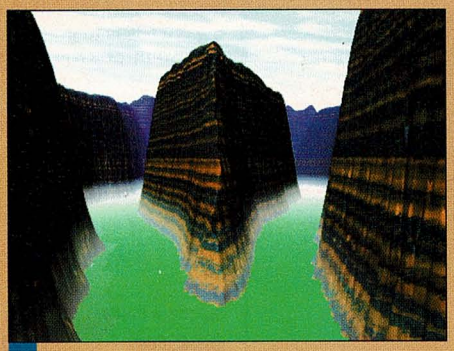


6 The first time you render your picture, you almost certainly won't get the effect you wanted. Try making small adjustments to everything, especially the texture of the ground and the camera's angle.

4 Click **Paste Pict** to replace the current terrain with the one we copied earlier. To smooth the edges and create a more natural look, press and hold down **Add Erosion** to create water erosion channels.



5 Camera placing is always important, and in this case we want it inside the valley. Use the Top and Side views from the **Views** pop-up menu to manoeuvre the camera (the blue line) to where you want it.



6 Give your ground and terrain a material (one with horizontal lines gives the valley a cliffs effect). You'll probably need to render the image several times to get the camera position right.

Desktop Tools 1.0.1

From the creators of *StuffIt* comes a suite of utilities to improve your Mac. But is this possible? Derek Smith is our man in the lab coat and specs.

VERSIONS

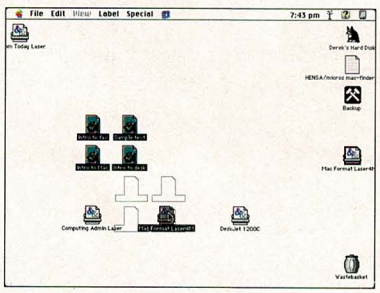
The 'new' PCI Macs (which we covered in more detail last issue) often demand upgraded versions of software – particularly utilities. *Desktop Tools 1.0.1* and *Speed Doubler 1.0.2* are both designed to work with all Macs, including these 'new' Macs.

Mac devotees rave about the superiority of Apple's System software with a zeal that borders on the religious. Even with the introduction of Windows 95, which has some technical advantages, supporters won't hear a word against System 7.

But if System 7 is so good, why are so many commercial and shareware products trying to improve it? Either System 7 lacks some tricks, or these utilities are superfluous gimmicks. The latest product to spur this debate is *Desktop Tools*, a suite of four Control Panels and three applications designed to enliven any version of System 7. Some of these are polished versions of utilities already available as shareware, while other bits are new, including *SpeedBoost*, the heart of the package.

SpeedBoost

This Control Panel speeds up and improves the way your Mac copies files, in a similar fashion to Connectix's *Speed Copy*, part of their *Speed Doubler* package (which scored 81% in MACFORMAT 31, and costs £70). Because copying and deleting takes place in the background, you have full access to the Desktop, enabling you to do things like open applications and print documents, which you couldn't normally do when copying. It also increases the actual speed of copying (see the panel below for a comparison).



Printing to any frequently used printer becomes as simple as drag and drop with *Desktop Printer* installed on your Mac.

However, *SpeedBoost* is not identical to *Speed Copy*. Whereas *Speed Copy* is an Extension, *SpeedBoost* is a Control Panel, meaning you can alter its settings – you can temporarily switch it on or off, allocate more RAM to enable it to work faster, opt for a recorded voice to tell you when copying is finished... you name it.

SpeedBoost also controls emptying the Wastebasket. It deletes locked files without asking, deletes items as soon as they are binned, and empties the Wastebasket on shutdown (just like System 6 used to). You can also opt for secure delete. Normally when you delete a file, it can be retrieved with a hard disk utility such as *Norton* or *MacTools*, which poses a security problem for business managers and errant husbands. With secure delete turned on, it permanently erases the file, making it impossible to retrieve.

If you only occasionally need to permanently delete files, however, a better option is to use one of *Desktop Tools'* applications, called *Desktop Secure Delete*. Dragging files onto this program permanently deletes them, while the Wastebasket operates as usual.

The success of *RAM Doubler* and *Speed Doubler* can probably be attributed to the fact that they take one minute to install, and can then be forgotten. *Desktop Tools* takes the opposite stance, giving you every last customising option they could think of. You end up with a more powerful package, but one that can be daunting.

Desktop Shortcut

With this Control Panel installed, every **Open** and **Save** dialogue box shows a small icon next to the name of the disk. Clicking on this reveals a pop-up menu, offering shortcuts for actions like creating new folders or deleting files. You also gain instant access to all recently used documents and folders, which is extremely handy – so handy, in fact, that it's already part of System 7.5. You can also have your favourite files and folders permanently appear in this menu. Of course, you could just put aliases of them in the **Apple** menu instead.

Magic Tools

The *Magic Tools* Control Panel puts a new pull-down menu in the Finder's menu bar, just to the right of the **Special** menu, giving you new options. **Get More Info** is similar to **Get Info** from the **File** menu, but also shows details such as the creator and type codes. If you're a bit techie, you'll find this useful, and it does mean you can avoid using *ResEdit*.

Make Alias To is intended to improve the way you create aliases. Normally you create an alias, drag it to your desired destination, then remove

SECURE DELETE

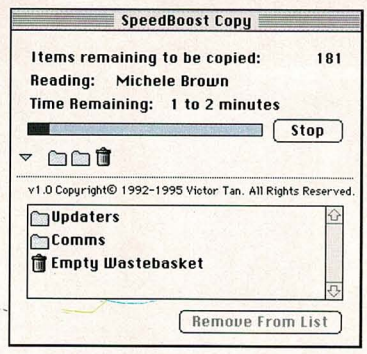
Like *Desktop Tools*, *Speed Doubler 1.0.2* also offers a secure delete function – where any files you delete cannot be retrieved, even using retrieval programs such as *Norton Utilities*.

SpeedBoost vs Speed Copy

Aladdin's *SpeedBoost* and Connectix's *Speed Copy* do a similar job – they both speed up file copying – so we put them head to head. One of the ways both utilities increase copying speeds is to grab some free RAM. *Speed Copy* always uses 500K of RAM, but you can adjust the amount of RAM that *SpeedBoost* takes, up to a maximum of 8Mb. In our tests we ran *SpeedBoost* with a setting of 500K and 2Mb.

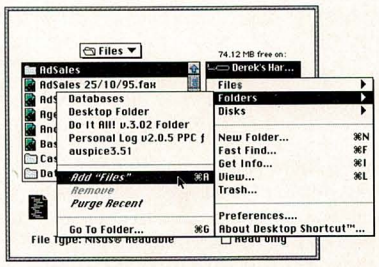
Our results reveal that *SpeedBoost* is often faster that *Speed Copy*, but the advantage only becomes significant when copying large numbers of files, especially when you allocate lots of RAM to it. Here are the test results, with times in minutes and seconds.

	Test 1	Test 2	Test 3	Test 4
Standard Finder	8:52	3:46	1:50	2:45
Speed Copy	4:29	2:34	1:37	2:05
SpeedBoost (500K)	3:58	2:17	1:39	2:16
SpeedBoost (2Mb)	2:24	2:04	1:26	2:11

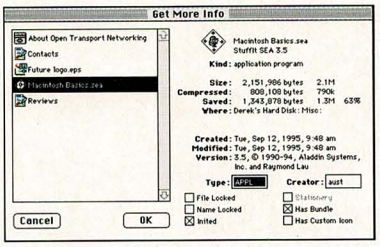


With *SpeedBoost* you can queue up as many jobs as you like, and if you change your mind, remove them from the list easily.

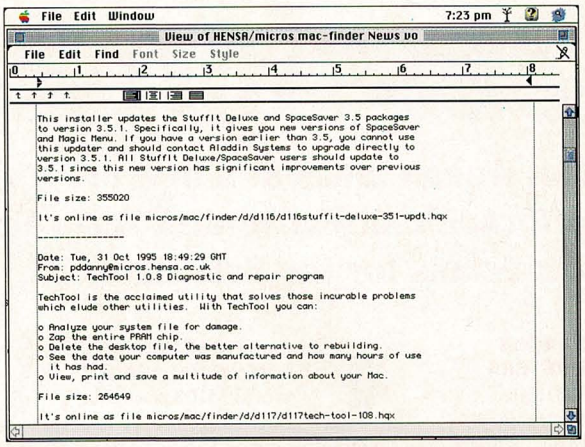
Test 1 – copying a 30Mb folder containing 1,000 files.
Test 2 – copying a 30Mb folder containing 500 files.
Test 3 – copying a 30Mb folder containing 20 files.
Test 4 – reading a 30Mb folder from CD.



Gain quick access to all your important and recently used files using *Desktop Shortcut.*



Magic Tools shows you more information about items, especially about *Stuff It* files...


File Edit Window
7:23 pm
View of HENSA/micros mac-finder News vo
File Edit Find Font Size Style
This installer updates the StuffIt Deluxe and SpaceSaver 3.5 packages to version 3.5.1. Specifically, it gives you new versions of SpaceSaver and Magic Menu. If you have a version earlier than 3.5, you cannot use this updater and should contact Aladdin Systems to upgrade directly to version 3.5.1. All StuffIt Deluxe/SpaceSaver users should update to 3.5.1 since this new version has significant improvements over previous versions.
File size: 355020
It's online as file micros/mac/finder/d/d116/d116stuffit-deluxe-351-updt.hqx
Date: Tue, 31 Oct 1995 18:49:29 GMT
From: pddanny@micros.hensa.ac.uk
Subject: TechTool 1.0.8 Diagnostic and repair program
TechTool is the acclaimed utility that solves those incurable problems which elude other utilities. With TechTool you can:
o Analyze your system file for damage.
o Zap the entire PRAM chip.
o Delete the desktop file, the better alternative to rebuilding.
o See the date your computer was manufactured and how many hours of use it has had.
o View, print and save a multitude of information about your Mac.
File size: 264649
It's online as file micros/mac/finder/d/d117/d117tech-tool-108.hqx

View text files using *Desktop Viewer,* which has a built-in mini word processor.

the word 'alias' from the end of its name. Using this option you can save an alias via a standard **Save** dialogue box to anywhere on your Mac – it even offers shortcuts to the Desktop and **Apple Menu Items** folder. However, it's cumbersome and only saves a few seconds from a task you probably carry out no more than once a day.

Other options enable you to gather files into a single folder, or move files around your hard disk via a **Save** dialogue box rather than dragging them. This seems to go against the whole point of a graphical interface.

Desktop Viewer

Desktop Viewer is an application enabling you to view files you have received, but which were created in a program you don't have. It sounds like the Holy Mac Grail, but the problem is that by itself it can only open word processing files saved as plain text, or graphic files saved as PICTs. Sounds familiar? That's because SimpleText does exactly the same thing, although it can't cope with large text files.

Desktop Viewer must have another purpose then, surely? Indeed it does. It *can* open other text and graphic formats, as long as you have the appropriate Claris XTND translators. XTND is an translator standard that was created by Claris and is increasingly being adopted by other companies. So, for example, if you have the EPS XTND translator, you can open any EPS files in *Desktop Viewer.* Now the easiest way to get hold of XTND translators is to buy a Claris product, or to install a demo such as *ClarisWorks 4* (MACFORMAT 31 Cover CD). But then, of course, you wouldn't actually need a copy of *Desktop Viewer.*

Desktop Makeover

Bored with that Desktop? Embarrassed by those sagging icons? Why not give your Desktop a makeover and make it more hip? This Control Panel changes several things about your Desktop. If you double-click on a file when you don't own the program that created it, you used to get the message that it couldn't be opened because the application couldn't be found. *Desktop Makeover* automatically finds a suitable program to open that file, which is once again such a great idea that Apple have already made it part of 7.5.

There are new icons for floppy disks that show you whether they are locked, or what density they are, and fancy icons for CDs and file servers. All reasonable, but not revolutionary. A genuinely useful feature is the ability to assign keyboard shortcuts to the Finder's pull-down menus, such as **Empty Wastebasket** or **Shut Down**. If you like to live on the edge...

Desktop Printer

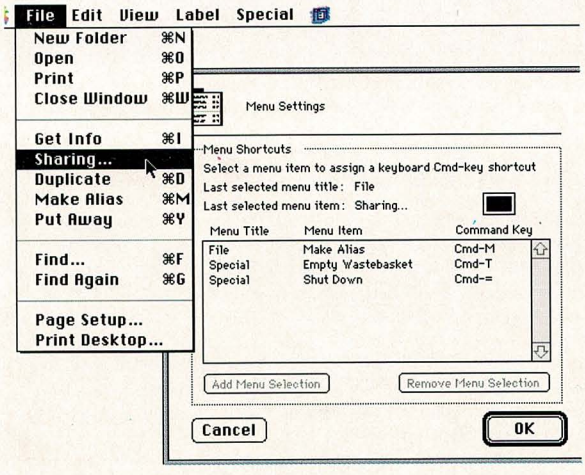
Using this application, you can create icons on your Desktop to represent each printer connected to your Mac, or on a network. Dragging a file onto a printer icon prints that document on that printer, while double-clicking a printer icon selects it as your chosen printer, just as if you had selected it from the Chooser.

Both of these features are very welcome, especially as beginners can find the Chooser a confusing place to spend time. Unfortunately, yet again, Apple have already realised this and made Desktop printing part of QuickDraw GX (we included QuickDraw GX on the MACFORMAT 27 Cover CD). However, QuickDraw GX requires lots of RAM, so Apple made Desktop Printing part of the LaserWriter 8.3 software, which is available free from their Web site. We'll give you the full details next issue.

Conclusion

Desktop Tools is a fine upstanding collection of semi-useful bits and bobs. However, with the exception of *SpeedBoost,* virtually all the features can be found in the latest versions of your System software, or shareware utilities – although if you are the honest sort of person who registers shareware then this package will save you some money. It will also save you some seconds, but weigh this against the time you'll spend reading the 108-page manual learning how to use it.

The main reason to buy *Desktop Tools* is for its copying enhancer, a superbly useful item for everyone but the lightest of home users. And since I preferred *Desktop SpeedBoost* to *Speed Copy,* I would come down on the side of *Desktop Tools*... just. But how long before Apple build it into their System software as standard? **MF**



Desktop Makeover enables you to assign keyboard shortcuts to any of the Desktop's pull-down menus.

DESKTOP TOOLS 1.0.1

Price: £46.95. **Out:** now.
Requires: any Mac running System 7.
Contact: MacWarehouse on 0800 181332.

FEATURES 81%
Lots, but many pointless.

EASE OF USE 85%
You don't need to be a brain surgeon, but some bits are fairly techie.

DOCUMENTATION 90%
Good, comprehensive manual.

VALUE FOR MONEY 88%
SpeedBoost is nearly worth the cost alone... which is just as well.

MACFORMAT RATING 83%

SPEED DOUBLER

You can buy *Speed Doubler 1.0.2* as a single package for £70.50, or you can get hold of it bundled with *RAM Doubler* for £93.95. Call Computers Unlimited on 0181 200 8282 to find out more.

TECH SUPPORT

Aladdin offer free e-mail tech support, which responded quickly and efficiently to our questions.

Session 2

Ian Waugh looks at a new program that brings affordable direct-to-disk recording to all Mac musicians for the first time.

JARGON BUSTERS

AIFF: Audio Interchange File Format. Developed by Apple to transfer audio data between programs.

EQ: Short for equalisation. A set of sophisticated tone controls for boosting and cutting certain frequencies in a recording.

OMS: Open MIDI System, developed by Opcode. It enables MIDI-based programs running on the same Mac to share data.

Pan: Short for Panorama. A control used to position sounds in the stereo image. For example, you might pan the guitar left, the piano slightly to the right and position the vocals in the middle.

SMPTE: Society of Motion Picture and Television Engineers. A professional synchronisation standard developed by the Society used to make videos, sequencers and tape machines run in sync.

Computers have revolutionised the way musicians work. MIDI sequencers now make it easy to record and arrange music using synthesizers and samplers, and they are cheap enough for all musicians to use, not just the professionals.

Direct-to-disk recording has revolutionised the audio side of music making, too. The big boys have been using DTD recording systems for years, but three things have been stopping the semi-pro and home musician from doing the same: money, money and money. You need a powerful computer system, lots of hard disk space, and DTD software – which, until recently, was expensive. Advances in technology have brought the first two way down in price, and Digidesign's new *Session 2* software is the cheapest DTD software yet for the Mac.

Up and running

If you have a PowerMac, you need no extra hardware to run *Session 2* – the PowerMac comes with the necessary chips that handle the digital-to-analogue process as standard. If you have a non-PowerMac, you need a Digidesign Audiomedia 2 card – which makes this option much more expensive – £1,056 more expensive, in fact.

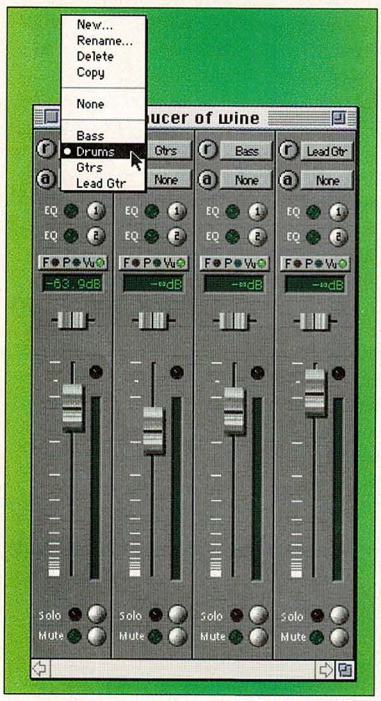
The Audiomedia 2 card offers two-track recording and four-track playback. You should be able to get 16-track playback from a 100MHz PowerMac, 12-track from 80MHz, and 8-track from 60MHz, but the actual capability depends on things like the speed of your hard disk and how much RAM you have. You need at least 16Mb of RAM – but then, that's the amount you'd need to get the most out of a PowerMac anyway.

The program installs easily, using a hard disk authorisation system as copy protection. There are two installs on the floppy disk and when you register you get a disk with another two installs. The only problem with hard disk installs is that if your disk has a serious crash it can take the install with it.

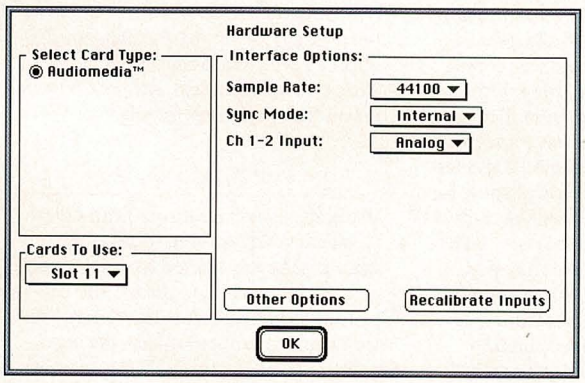
Windows

Session has three main windows: Edit, Mix and Transport. Recording is dead easy – you simply connect the audio source to the Mac or the Audiomedia card, and adjust the volume. The input channel in the mixer shows the record level – make sure it's not too loud, or the sound will distort. All you do is click on **Record,** then on **Play** to start, and **Stop** to finish.

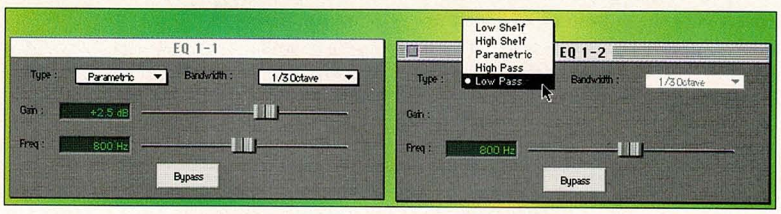
The recording appears on the track and an entry for it appears in the Regions list. You can then drag the recording to any position on the track, or even to a different track; or you can



You can select audio Playlists from a pop-up menu to change track arrangements quickly.



If you don't have a PowerMac, *Session 2's* Hardware Setup window enables you to set the Audiomedia 2 card interface options.



Each mixer channel has two EQs, which you can use together. You can also set them to one of five different types. EQs are tone controls used for controlling certain frequencies during recording.

WHAT'S DIRECT-TO-DISK RECORDING?

DTD recording is the computer's answer to multi-track tape recording. Music is still recorded on a number of tracks, but instead of being recorded to tape, it's saved to a hard disk.

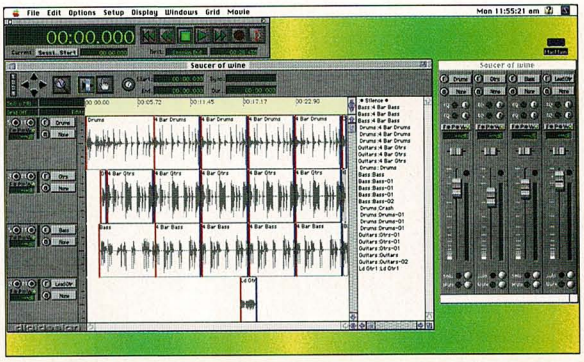
You can construct a piece of music from small audio clips, dragging them around the tracks to create a finished song. The sections you move on-screen contain pointers to the recordings on disk, so you can use one recording as often as you want and the original recording is unaffected – a process called non-destructive editing.

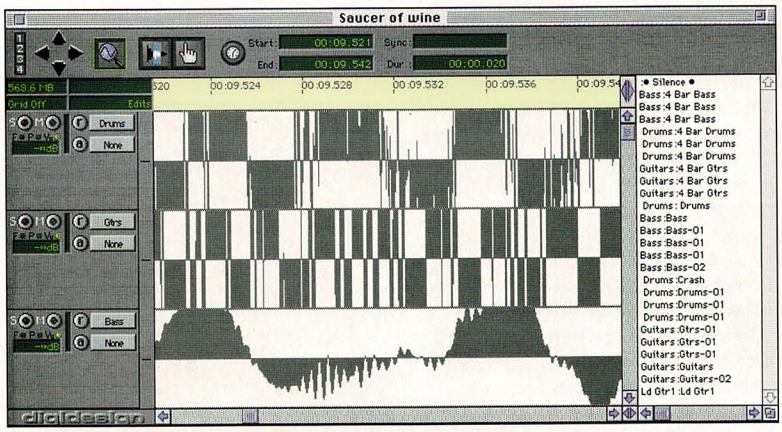
Music on tape is extremely difficult to edit – if you want to change a part you have to record it again. But music in a digital format on disk can easily be edited and processed, just like MIDI data in a sequencer. Many modern DTD systems are capable of applying effects such as EQ to a part – and if you don't like the result you can just return to your original recording.

This makes DTD recording much more powerful than the traditional method of multi-track tape recording. You also have far more control over digital audio than you have over tape-based recordings.

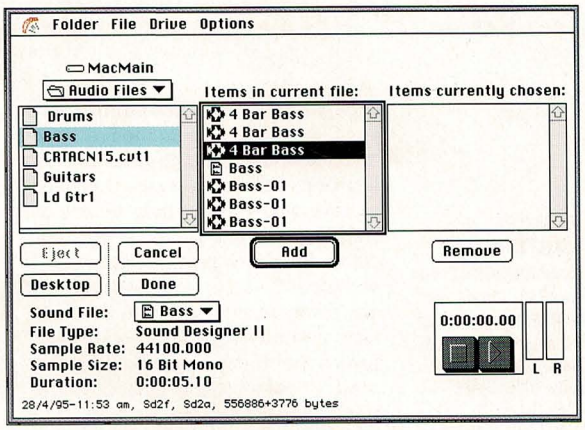
Session supports QuickTime movies, which automatically synchronise to the recorder, making it easy to add sound to a movie.

A typical *Session* session, using the three windows to record, edit and mix digital audio recordings.





The Edit windows with the tracks in the centre. You can zoom in on the recording to help with precision editing. On the left are buttons for soloing, muting tracks and activating record mode; on the right is the regions list, which contains a list of the recordings you make.



Session can import audio files in a variety of popular sound file formats, including Sound Designer 2.

cut it into smaller sections and drag them onto any track.

When you divide a recording in two, both parts appear as new entries in the Regions list. When the program does this, it doesn't create more files; it simply stores pointers to the sections of the original recording that you indicated. This non-destructive editing is an essential part of DTD recording.

Session can also import audio files. It supports AIFF, Sound Designer 2, Snd and WAV file formats, and there are thousands of sound files on the Net that you can use in your own music – just be careful that you don't breach any copyright restrictions. You can also transfer data from audio CDs onto your hard disk, which keeps the data safely in the digital domain and maintains its quality. This is ideal if you are using sample CDs.

As you work you will probably construct tracks using many different regions. You might record a guitar solo and a sax solo, for example, and create different arrangements using the two recordings. Each arrangement is referred to as a Playlist – you can create as many Playlists as you wish, and you can swap between Playlists at the click of a button, which makes it easy to experiment.

Session's edit features include Cross-fades, which create a smooth transition between two adjacent audio regions. They fade out the end of one audio region while fading in the start of the following one. *Session* has 25 different fade shapes which you can use for fade ins and outs. This provides you with a total of 625 possible cross-fade combinations.

Mixing it

The Mix window is where you balance the volumes and set the pan positions of the tracks. You can do this easily by clicking and dragging the controls with the mouse. You can also record the movements to create automated mixes, then when you play back the mix the controls move, which looks flash as well as showing you what's happening to the sound. As with audio Playlists, you can store mixes in automation Playlists, which makes remixing easy.

If you prefer the feel of real faders under your fingers, you can use a dedicated MIDI controller, or even the modulation wheel or data entry slider on your synth.

The Mixer also has two EQ controls per channel. Each can be set to one of five types, and the two EQs on each channel can be used together, which gives you plenty of potential for creative EQing. However, values must be set numerically with sliders – some sort of graphic control would make them much easier to work with.

Working methods

If you have a PowerMac and lots of tracks to play with, then you have lots

JARGON BUSTERS

SND: Regarded as the Mac's native sound file format and often referred to as System 7 Sounds. They have a loudspeaker icon and play if you double-click on them.

Track bouncing: The process of combining or mixing two or more tracks and storing the result on another track.

WAV: The sound file format used by Windows on the PC.

Continued on next page

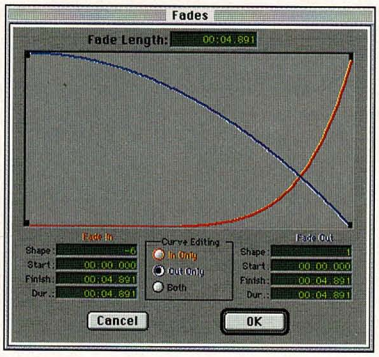
HOW DIGITAL AUDIO WORKS

DTD recording is the process of converting audio signals into digital and storing them on your Mac's hard disk. Two important parameters determine a direct-to-disc recording's quality: the sampling rate and the resolution.

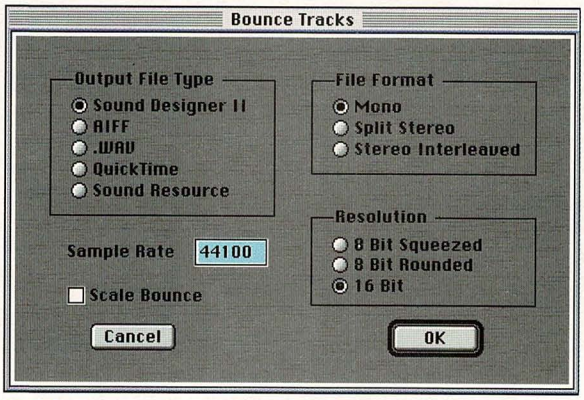
The AV's built-in hardware and that of the Audiomedia card contains an A-to-D (analogue-to-digital) converter which measures or 'takes a sample' of the incoming sound so many times each second. This is the sampling rate – measured in KHz or so-many thousand samples per second. A D-to-A (you can work it out) converter reads the data off the hard disk and converts it back into audio.

The higher your sampling rate, the more samples are recorded, giving you a more accurate and better quality digital recording. CDs use a sample rate of 44.1KHz, which is almost indistinguishable from natural sound.

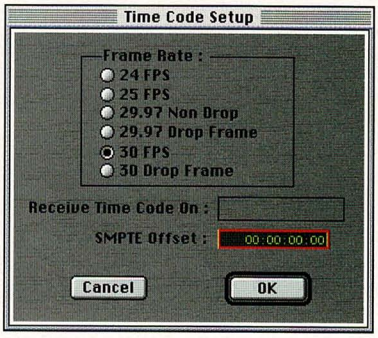
The sampling resolution is the accuracy or fineness of the measuring scale, and is measured in bits. The more bits used to store the data, the more accurate the result. CDs use a 16-bit resolution; most multimedia and computer-based applications use 8 bits. The trade-off is space – the higher the rate and the more bits you use, the more space the data requires and the more processing power you need. One minute of CD-quality stereo recording uses 10Mb of hard disk space.



You can create 625 different crossfade combinations by clicking and dragging the fade-in and fade-out curves.



With *Session* you can bounce several tracks down onto one track with no deterioration in sound quality.



Session supports all the SMPTE synchronisation formats for syncing to external sequencers, video machines and tape recorders.

of scope for creative recording. However, even with a more modest system and only four tracks you can still do a lot. One of the advantages of digital audio is that you can bounce or mix tracks, just as you can on a tape machine, but the data stays in the digital domain. The process doesn't introduce any of the noise which you get with tape, and non-destructive editing means that if you don't like the mix, it's no problem to just go back to the original recording.

Another common way of working is to create a backing track in a MIDI sequencer and synchronise it with recorded vocals and acoustic instruments. *Session* will synchronise to an external MIDI sequencer, and also to one running concurrently on the same Mac. To do this, the sequencer must support Opcode's OMS – most major sequencers do, but many of the budget ones don't. *Session* also supports SMPTE, so you can synchronise to a tape machine or video.

But even if you're not writing music for Hollywood movies yet, you can use *Session* to add a soundtrack to a QuickTime movie. If you have an AV Mac, you can record your own movies; if you don't, not to worry, there are lots of QuickTime movies around in the public domain which you can experiment with instead.

Session can import a QuickTime movie and soundtrack, which you can then cut and edit just like any other recording. The audio and movie are synchronised, and when you've completed the soundtrack you can save everything together as a normal QuickTime movie.

Unfortunately, *Session's* major omission is its lack of effects and processing functions. Several combined sequencers/digital audio programs have Time stretch functions, and Digidesign's more up-market DTD systems, such as *Pro Tools*, support digital effects like Reverb. Nevertheless, *Session* is still a powerful and professional program. If you don't need the integration of a combined MIDI sequencer and digital audio program, *Session* will handle your direct-to-disk recording needs very well, and it can still synchronise to a sequencer if necessary. It looks good, it works well and it's affordable. **MF**

JARGON BUSTERS

Sound Designer 2: The sound file format used by Digidesign's *Sound Designer 2* software and by many digital audio programs.

Time stretching: A process that can be applied to digital audio to change the pitch of a recording without changing the duration and vice versa.

SESSION 2

Price: £175. **Out:** now.
Requires: either a PowerMac, or a Quadra or IIci or equivalent with an Audiomedia 2 card. 16Mb of RAM, System 7.1 or later.
Contact: Digidesign UK on 01753 653322.

FEATURES 78%
All the basic features you need to produce good digital audio recordings but more processing functions would be useful.

EASE OF USE 86%
Colourful windows and a reasonably intuitive interface will have you making music in a very short time.

DOCUMENTATION 86%
Excellent Quickstart guide, useful booklet introducing *Audio for Multimedia*, comprehensive *User's Guide* and a Quick Reference Card.

VALUE FOR MONEY 92%
Currently the cheapest stand-alone DTD program for the Mac, offering many pro features at a reasonable price.

MACFORMAT RATING 89%

ALTERNATIVELY...

There's little to touch *Session* when it comes to price and performance. The only program available at a similar price is Opcode's *Digitrax* (£189.95). This will run on any AV (audio-visual) Mac and offers real-time chorus and flange on AVs. It doesn't have as many EQ types as *Session*, although it can show them in graphic form.

If you don't possess a PowerMac or an AV Mac, you need to get hold of a digital audio card such as Digidesign's Audiomedia 2 (£1,056). Unless you want to spend several grand on a DTD system, this is your only choice. It comes with the *Sound Designer 2* DTD software bundled, which is competent if showing its age just a touch. Features include EQ and time stretching, and if you do buy an Audiomedia card you may find the software does everything you need.

The only other major standalone DTD program is OSC's *Deck 2* (£399), which has a few more features than *Session*, although its interface is a little more complex. However, it will run on a standard AV Mac and in 8Mb of RAM. It supports more sample rates, and you can work with as many tracks as you wish, although, as with *Session*, playback is limited by your hardware. It has been specifically designed to run concurrently with OSC's *Metro* sequencer (£199), and the two interface extremely well.

If you want to use MIDI and digital audio together, your best option is to get a combined sequencer/DTD program. Without a doubt, one of the very best on the market is Emagic's *Logic Audio* at £649 (see the review in MACFORMAT 31), which displays both MIDI and audio data as patterns – you can drag these around the tracks, making it very easy to integrate and edit both. It includes some excellent processing functions and is altogether extremely powerful.

Steinberg's *Cubase Audio* (£799) is another combined package with the almost-legendary *Cubase* user interface. It's currently lagging slightly behind *Logic Audio*, but a new version should be out by the time you read this. Definitely one worth checking out.

Digital Performer (£599) from Mark of the Unicorn (MotU) was one of the first DTD programs to appear and has been radically updated since then. Used by many of the professionals, it's another sequencer/DTD program worthy of serious consideration.

Opcode's *Studio Vision Pro* (£799.95) for Audiomedia-equipped Macs and *Studio Vision AV* (£599.95) for AV (audio-visual) Macs both add DTD recording to the *Studio Vision* sequencer. Another very powerful combination and both products include *Galaxy Librarian* software.

Where you can get them:

- Opcode's *Digitrax* (£189.95), *Studio Vision Pro* (£799.95) and *Studio Vision AV* (£599.95): MCMXCIX, 0171 723 7221.
- Digidesign's Audiomedia 2 (£1,056): Digidesign UK, 01753 653322.
- OSC's *Deck 2* (£399) and *Metro* (£199): Natural Audio, 0181 207 1717.
- Emagic's *Logic Audio* (£649): Sound Technology, 01462 480000.
- Steinberg's *Cubase Audio* (£799): Harman on 0181 207 5050.
- MotU *Digital Performer* (£599): MusicTrack, 01462 733310.

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Allman Brothers - Brothers of the Road	£10.99	PNV1013
Bergkamp: A Perfect 10	£10.99	PNV1001

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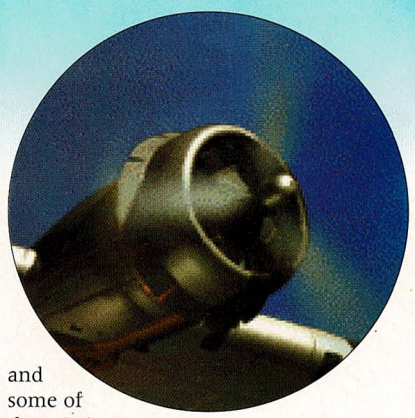
Wings: Midway to Hiroshima

Concentrating on the second half of WWII, yet another multimedia CD panders to the Americans. But for once it's forgivable – this will appeal to all plane buffs.



Military aircraft are evil things. The bombs they drop kill and maim indiscriminately and that's just not nice. Nevertheless, warplanes are as fascinating as they are deadly, and *Wings: Midway to Hiroshima* pays homage to a particularly interesting phase of aircraft history – the second half of World War II.

Why not the whole War? Well, the Yanks didn't join the war until just before it was half over, and this disc panders to the Americans by only covering their period of involvement. However, on this occasion we can forgive *Wings: Midway to Hiroshima* its Americanness – but only because it's a very good piece of multimedia.

That's the nasty ethnocentrism out of the way. *Wings: Midway to Hiroshima* is built on a database of 636 WWII aircraft plus a further 52 weapons. Starting with the Aeronica Grasshopper, the database covers everything up to the Yokosuka Ginga, with photos of nearly every entry plus details of manufacturers, model variations, service ceilings, maximum ranges, engines, crews, armaments – the lot. Top stuff for the buff, as you'd expect.

But multimedia cannot live by database alone, and you get much more than just detailed descriptions of the planes. An important feature of the disc is its collection of 15 virtual versions of top planes, including the P-51 Mustang and the Stuka divebomber. You get an accurate 3D rendered view of the plane that can be rotated and zoomed. While you look at it you can listen to sample sounds from its engines, and look at all the detailed info from the craft's database entry, too.

You can pick one of these planes to look at right away, or you can check out one of five 'virtual' airbases. Bases include two in the UK, plus others in North Africa, Poland and on a US aircraft carrier. Airbase sounds go on while you explore, and from the base you can jump out to history lessons on aspects of the air war, like the Italian airforce or the bombing campaign. These are basically narrated slide shows with photos, maps and video.

To round it off, there's some gaming action consisting of a flight sim section with three missions to fly. These are pretty poor compared to a dedicated flight sims like *Flying Nightmares*, but they offer some challenging fun (zipping out and shooting a few tanks) before studying the finer features of WWII assault gliders. Be warned though – all the planes fly the same, and some of the missions are rock hard. Still, a good inclusion.

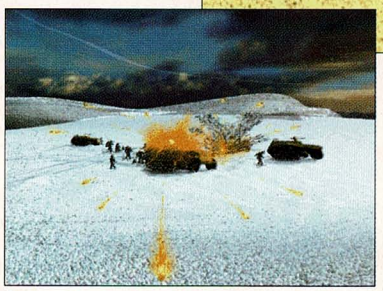
The interface does the job effectively. Everything's presented as though it were on an airplane's instrumentation panel – you click levers, buttons and switches to get from screen to screen. The only trouble with *Wings* is that everything seems fragmented – the virtual airfields and rendered animations of the air attacks look like add-ons, with little importance beyond their three-second-thrill aesthetic value. Also, it could do with some music and a few more sounds.

Apart from this, *Wings* is an interesting and generally well-assembled disc, which is very impressive in places. Great for the buff, and possibly for the student too.

GARRICK WEBSTER

At the virtual airfield in Tmimi, North Africa, you can examine a rendered version of the Luftwaffe's Junker JU88.

This Navigator screen serves as the main interface. A narrated historical slide show like the one on the Thousand Bomber raids is a click away.



Among the six animated flight patterns is the charmingly entitled Fragmentation-Bomb Attack. Watch a Soviet plane drop its 'antipersonnel bomb' on a group of Germans.

WINGS: MIDWAY TO HIROSHIMA

Price: £39.99. **Out:** now.
Requires: LC or better, 8Mb of RAM, System 6.0.7 or later, 13-inch colour monitor, and a double-speed CD-ROM drive.
Contact: Astrion on 0181 202 0011.

MACFORMAT RATING 86%

Wings: Korea to Vietnam

Hey everyone, it's napalm time. Not *another* disc on military aircraft? Covering the period after WWII, this one appeals to jet fanatics.

Planes like the Spitfire may hold a special place in our hearts for helping save this island from invasion, but for many airplane buffs it's after WWII that things got really interesting. Along came the jet engine, facilitating supersonic dogfights, rapid reaction attacks and the rest. *Wings: Korea to Vietnam* is especially interesting if you're a jet-type plane person.

The disc is similar in layout to the *Wings* disc reviewed opposite. At its heart is a database of photos and all sorts of other details on some 500 aircraft. The main difference between the two discs, other than subject matter, is that *Wings: Korea to Vietnam* is less VR-orientated and therefore more direct.

When you go off to explore one of the five period airbases on offer, you don't have to plod around looking for hotspots. Each airbase (these include one in Korea, three in Vietnam and one Cold War UK base) is just a single screen, and moving the cursor around reveals all the links available. Instead of the pointless wandering you find in *Wings: Midway to Hiroshima*, you can go off to the interesting bits with more immediacy from the airfields.

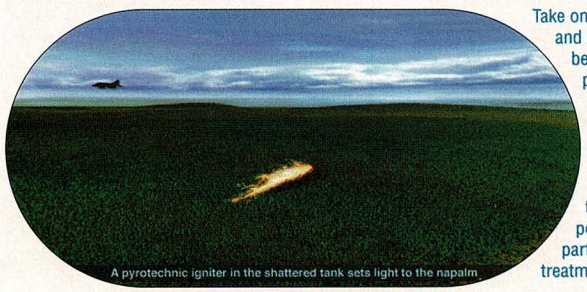
Having said that, most of the interesting bits are set out in a similar way. There are rendered versions of 15 aircraft, including the F8F Bearcat, the USAF Phantom II, and the MiG-19, but, disappointingly, the rendered jobs aren't linked to the database entries this time. Around 45 war reports, which are basically multimedia presentations, detail historical points concerning the role of planes in warfare during Korea, the Suez Crisis, Vietnam, the Cold War and other post-WWII conflicts. Some of these contain narration, photos and videos, while others are just maps with captions.

The information in the war reports is factual, but sometimes lacks analytical teeth. In the entry entitled 'Air Superiority in Vietnam', the narrator reels through jet after jet used by the US explaining the weapons, tactics and so on. Air superiority is clearly established, but it's never mentioned that despite the US jets, the War was lost. From a historical point of view this disc is good for facts on planes and air war tactics, but it's slightly pointless from broader perspectives.

This is also the situation with the Timelines section of the disc. Seven timelines are included, which you click your way along. With each click, a new caption appears with more info on air conflict developments, while icons for plane, helicopter and troop deployments appear on a map in the background. Great if you want to know the events, but it's a linear experience. For example, links to the aircraft database could have been included on some of the planes mentioned, in case you haven't heard of them.

Wings: Korea to Vietnam is nearly on a par with its sister. Some sections of the disc are more immediate, doing away with fumbling around in VR environments, but while there's lots of varied features, there aren't enough links between them.

GARRICK WEBSTER



A pyrotechnic igniter in the shattered tank sets light to the napalm.

Take one cylindrical container and pour in two gallons of benzene and two gallons of petroleum. Shake, and sprinkle in some magnesium to raise the burn temperature. Strap on a small detonation charge and drop on any tropical-dwelling peasant population. Can also be particularly useful in the treatment of lice.

The Korean War
June 25
North Korean forces invade South Korea, thereby precipitating the Korean War. At the start of hostilities, the North Korean air force has 162 aircraft (70 Le-11 'Fang' and Yak-9 'Frank' fighters, 62 Il-10 'Beast' close-support aircraft and 30 Po-2 'Mule' and Yak-18 'Max' trainers) to the South Korean air force's 16 miscellaneous and unarmed trainers.
CHINA
Yalu River
Chongjin
NORTH KOREA
Pyong Yang
Wonsan
Sea of Japan
Seoul
Inchon
SOUTH KOREA
Yellow Sea
Kunsan
Pusan
JAPAN
QUIT
NAVIGATOR
BACK

If you're after historical facts on the Korean War, you might like to see the Timelines section where events are detailed via captions and maps. It's just a shame that there are no links provided here to other sections of the disc.

No plodding around rendered airfields with *Wings: Korea to Vietnam*. Here they're represented by a single screen. This is Phuc Yen in North Vietnam.

If the planes aren't enough to get you excited, hey, there's also a database of 140 aircraft weapons. Get wicked with this Thompson Brandt 100 Series Multi-Dart. Fun stuff.

WINGS: KOREA TO VIETNAM

Price: £39.99. **Out:** now.
Requires: LC or better, 8Mb of RAM, System 6.0.7 or later, 13-inch colour monitor, and a double-speed CD-ROM drive.
Contact: Astrion on 0181 202 0011

MACFORMAT RATING 81%

The Ferrari Legend

The disc that tells you all about the cars that sport the badge of the Italian stallion. But do coffee table CD-ROMs actually make any sense?

Ever found yourself at a friend's house, relaxing in a comfy chair and flicking through a coffee table book, looking at the pictures and reading the captions while they make you a cuppa? Ever found yourself sitting at a friend's Mac plodding through a so-called coffee table CD-ROM while the aforesaid brew gets fixed? The former sounds quite possible; the latter almost inconceivable.

Among all the multimedia mumbo-jumbos you're likely to come across, the coffee table CD-ROM has to be the pinkest of pink elephants. And the two *Legend* titles, *Ferrari* and *Porsche*, are prime examples of the genre.

Given the choice of Porsche or Ferrari, wouldn't you pick the latter every time? The Porsche's curves are slightly too effeminate and it's too easy to envisage Hollywood housewives driving off in one to their plastic surgeons. Not so with the Ferrari – its bullet-like profile seems focused on instant speed, not to mention its altogether louder roar. And it's not just a macho thing – the Ferrari's more expensive too.

Your choice would sway in the same direction if asked to choose between *The Porsche Legend* (reviewed on the opposite page) and *The Ferrari Legend*. Although *The Ferrari Legend* is a year older, and thus one year further out of date, it has more meat to it than its younger, more effeminate cousin.

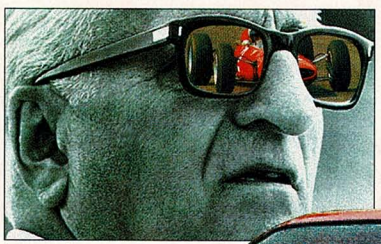
To begin with, you get details on 39 different cars in the Models section, as opposed to just 22 with the Porsche disc. Then again, there are only three to six photos of each Ferrari, as opposed to around a dozen of each Porsche. But that doesn't matter too much. You still get all the minutiae about the engines, transmissions and body measurements, plus text giving details on the development of each model and how it influenced future models – even what races it won if it was a racer. The big plus in the Models section is that you can turn a key in the corner of the screen to hear a sample recording of each individual car starting and driving off. Fantastic fun for Ferrari fact freaks.

There are also more videos on the Ferrari disc. These are displayed in a smaller window, and, despite being slightly blocky, run better with superior sound. There are four videos, one focusing on each era of Ferrari's development, and one longer video in the section devoted to Enzo Ferrari. The venerable gent states in rather opaque terms the philosophy behind his business. 'Today we're not looking for absolute speed, but for instant speed,' he ruminates in Italian. Of course, the video of Enzo sitting in a shady room is spliced together with some F1 racing footage, as well as bits showing mechanics working on cars and road cars going fast.

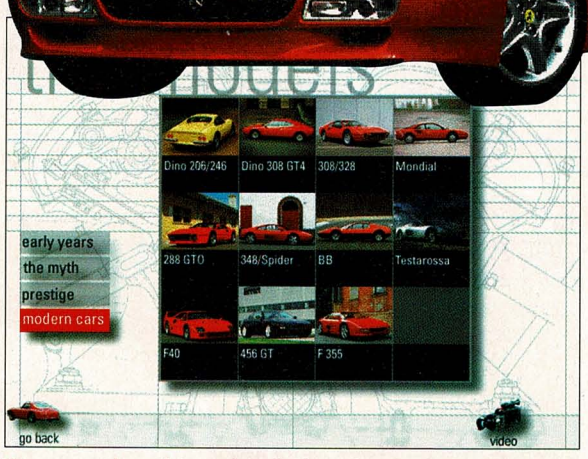
The text is rather disappointing – it looks suspiciously like it was written badly in Italian first, then translated badly into English, and some of the sentences make little sense. The Events section details the history of Ferrari since WWII, but is impenetrable (and boring) unless you're quite clued up on cars and Ferraris already. Hyperlinks to a glossary help to some extent. The Man, which is a biography of Enzo Ferrari, is also poorly written and only goes up to 1949. Furthermore, it rarely ventures away from the automobile side of his life, so there's little human interest here either. Dull.

Both discs are similar, but *The Ferrari Legend* features more cars, has video that runs with better quality and includes one or two nice touches. Like *The Porsche Legend*, it is a coffee table CD-ROM – a slightly better one at that. It's not even nearing brilliance though.

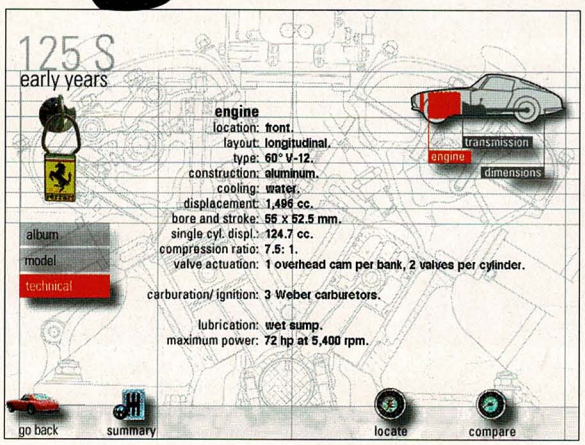
GARRICK WEBSTER



Meet Enzo Ferrari, sire of the famed car company, and of at least one illegitimate child. Must be the shades.



You can zoom in on photos and details of your favourite Ferraris. Sections include early, prestige, the legend and modern, as you can see here.



You can check out the technical gumpf on every Ferrari you've ever dreamed of, and if you click the ignition key in the top left corner, you can hear the car power up. This is the world's first Ferrari, the 125S.

THE FERRARI LEGEND

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Requires: LC or better, 4Mb of RAM, System 6.0.7 or higher, CD-ROM drive.
Contact: Ocean Software on 0161 832 6633.

MACFORMAT RATING 57%

The Porsche Legend

Curvy cars, yes, but is the CD as slick as its subject matter? Find out if this multimedia product wins in the toss-up between book and CD-ROM.

The Porsche Legend is another prime example of the coffee table CD genre. Yes, it has lots of nice, big pictures of Porsches. Yes, its subject matter is limited. Yes, it is shallow on the information side. But no, you can't leave it on a coffee table to amuse guests. They might get the wrong idea and put it in your stereo instead of your Mac for a start.

So, to what purpose? As you might have guessed, you have to be a Porsche buff, and possibly car mad too, to appreciate *The Porsche Legend*. From its main screen, the disc has four sections: Models, Current Events, Ferdinand Porsche and the obligatory multimedia Quiz.

Dipping into the Models section, you'll find a vast array of impressive pictures of Porsches. Details on eight 356 models, eight 911 models and six others are available, with text descriptions and figures on all sorts of engine specifications, plus the usual hypertext links to a glossary. The glossary itself is reasonably useful, but the occasional odd word is irritatingly absent – if you don't know what 'cabriolet' means, don't expect to find out here. Forgetting that, however, if you hit the auto button you're presented with a complete slide show of between a dozen and 20 pictures of each car, displayed at full screen size.

Did you know that the 150,000th Porsche was produced in September 1970? Well, that fact comes from the Current Events section of *The Porsche Legend*. The title's actually something of a misnomer – this is more of a brief history covering the years 1948 to 1994. You just click the year on the left of the screen and text for that year appears to the right. Alternatively, you can just page through the text, reading down the years.

Bohemian rhapsody?

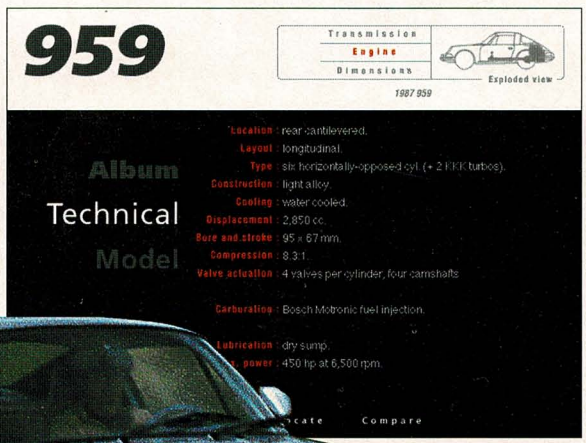
The Ferdinand Porsche section, as you may have guessed, is a text and photo biography of the man who founded the Porsche car company. He also designed the even curvier Volkswagen Beetle, built an electric car in 1900 and came from Bohemia. It's a shame the text is so badly written.

Finally, the music will really get up your nose. String instruments squeak out sad European whining, while car engines vroom in the background. It loops every 90 seconds and will drive you mad (no pun intended). There's no other sound on the disc.

The main redeeming factor about *The Porsche Legend* is its price – about £20 cheaper than most other CDs. Nevertheless, you need two elements in your nature before you part with your money. First, you must be barmy on Porsches. Second, you must be most forgiving to the concept of coffee table multimedia products. Otherwise, get a book.

GARRICK WEBSTER

Porsches new and old are thoroughly covered including the 356 and the more recent 928 with its fancy upwards aiming headlights.



Engine and body details, a text description and about a dozen photos are available for each of the 22 types of Porsche featured. Here's the 959.

Meet Mr Porsche, the Bohemian engineer who designed the Volkswagen Beetle and sired the famous Porsche family. He was jailed after World War Two for collusion.

THE PORSCHE LEGEND

Price: £24.99. **Out:** now.
Requires: LC or better, 3.5Mb of RAM, System 6.0.7 or higher, 13-inch colour monitor, CD-ROM drive.
Contact: Ocean Software on 0161 832 6633

MACFORMAT RATING 48%

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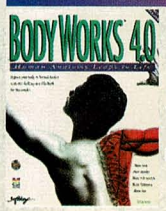

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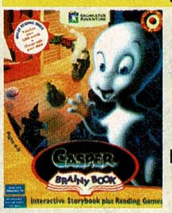

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Cartoon Jukebox

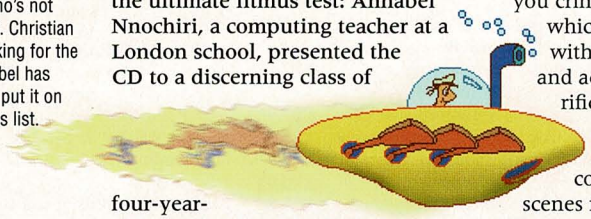
Pump up the volume, kids, 'cos we've got a wholesome CD full of songs and animation. Meet Mary's lamb and Farmer MacDonald, and watch weasels going pop.

Colour in the characters as you savour the mellifluous tones of *Pop Goes the Weasel.*

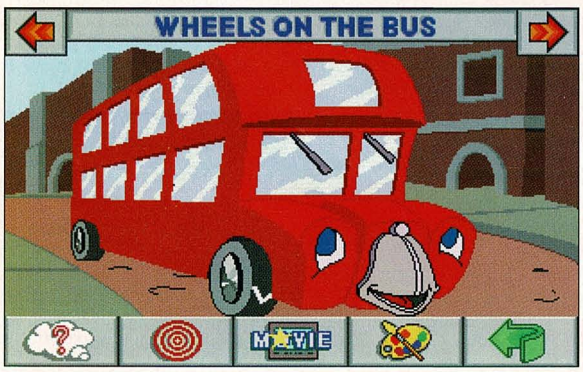
SMASH HIT

Despite our reservations about *Cartoon Jukebox*, we have to admit that it was a real hit with Annabel's son, Christian, who's not even two yet. Christian keeps on asking for the CD, so Annabel has given in and put it on his Christmas list.

Brightly coloured animation assaults your eyes and a smiley red jukebox leaps onto your screen, inviting you to listen to some songs. Aimed at three to six year olds, *Cartoon Jukebox* offers ten songs accompanied by appropriate animations. The CD is described as educational in the accompanying bumph, so we gave it the ultimate litmus test: Annabel Nnochiri, a computing teacher at a London school, presented the CD to a discerning class of four-year-olds and let them do their worst.



The format of the CD is straightforward. As well as just listening and watching, you can colour in scenes from each of the cartoons on screen. A game of sorts also accompanies some of the songs, where you click on one of the characters or objects and the relevant part of the song is replayed – a good way for your child to learn the song, but otherwise fairly useless.



The menu bar offers you help, a pointless game, a cartoon to accompany the song, colouring-in and return to the main screen.

The songs range from classics that most people will remember from their own childhoods *(The wheels on the bus, Mary had a little lamb,* and *Row, row, row your boat)* to the distinctly American *Home on the range* and Spanish *De Colores,* which you can listen to in Spanish, French, English (denoted by an American flag) or 'chicken' language – yes, really. Most of the songs are suitable for the recommended age range of three to six, and the children loved *Cartoon Jukebox* because they recognised so many of the tunes and could join in with them.

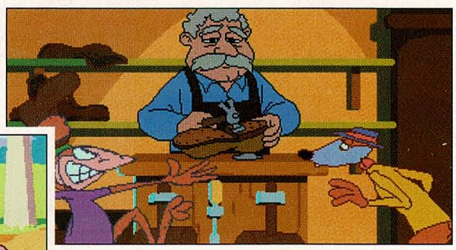
The animation is a little pixellated on screen, but each song has a different drawing style and singer, making them more interesting and undoubtedly increasing the longevity of the CD. Particularly amusing is *Old MacDonald had a farm,* with animals popping out all over the place and a very laid back farmer with an impressive moustache. Mary's ovresized lamb is also worth a laugh. The only song that will truly make you cringe is *Twinkle, twinkle little star,* which is sung by some kid with a squeaky, flat voice and accompanied by a horrific, cutesy animation.

The kids were amazed at being able to colour in characters and scenes from the songs on screen and see them instantly appear in their new style. The pictures can also be saved and viewed again on another day, which they thought was great. While you are colouring, you can choose whether you'd like to hear the music in the background or not. The magic paintbrush which you use to select the different colours from a palette is easy to operate and is good for teaching young children the basic skill of colour-filling.

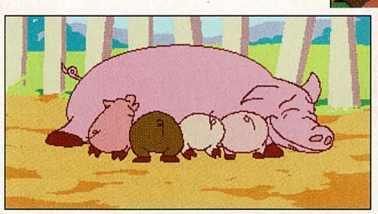
However, the genre of multimedia has certainly not been fully exploited here, and there is little reason why *Cartoon Jukebox* shouldn't be a £12.99 video, instead of a £29.99 CD-ROM. The animation would probably be better quality as a video, and you'd only lose out on the colouring-in feature, which isn't exactly demanding – a colouring book would be far more challenging. As for the game, it is just a way of regurgitating the song – you can achieve more or less the same thing with the rewind and fast forward buttons on your video recorder.

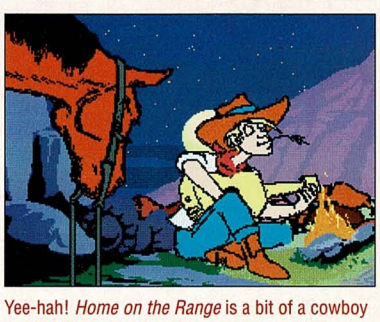
Row, row, row your boat/submarine/viking ship... Artistic licence takes over in the animations that accompany the songs, with some curious results.

Cartoon Jukebox is recommended as a learning tool for parents to use with their kids, but it isn't particularly educational. Popular as it proved with the class of four-year-olds, a video of the same songs would have kept them just as happy – the CD provides an expensive alternative with limited extra options. **ANNABEL NNOCHIRI & EVA LAUER**



A placid cobbler hammers at a shoe as two weasels beat each other up. Quite entertaining, but the lyrics are nothing like the original.





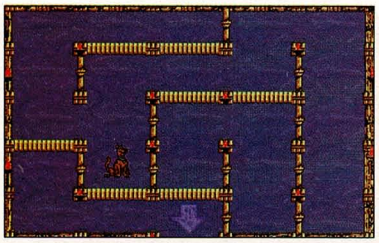
Yee-hah! *Home on the Range* is a bit of a cowboy song, with appropriate singer and animation.

CARTOON JUKEBOX

Price: £29.99 **Out:** now
Age range: three to six years.
Requires: colour Mac, 6Mb of RAM, System 7 or later, 256 colours, double-speed CD-ROM drive. 8Mb of RAM recommended.
Contact: Philips on 0171 911 3081.

MACFORMAT RATING 75%

Cartoon Carnival



Oi, that was a gap a moment ago, give it back! Trap doors open and close to hinder your escape.

It's a Hanna Barbera extravaganza, with 'yabbadabbadoo's resounding through the disc and loads of familiar characters to play games with.

Cartoon Carnival brings your children's favourite TV characters onto the computer screen. Scooby Doo, Fred Flintstone, Yogi Bear, Huckleberry Hound and friends are all willing and waiting to delight your little darlings with 'hours of fun filled learning', as the manual confidently blurbs. But how much will they actually learn? We tested it out on an enthusiastic class of nine-year-olds to find out.

Click on the boxes to match the pairs. Simple, except that the boxes keep changing, so you'd better be sharp-eyed.

The six cartoon characters each provide you with a game to play. Pitched at kids aged six and over, the games are surprisingly simple. Each time you complete a game, you are rewarded with an animation of the next letter dancing into its position in the title. You can play each game as many times as you like and can't possibly lose – the only incentive is to fill the letters of the CD title, *Cartoon Carnival*. The more you play each game, the faster it gets, unless you choose to start over on the simplest level – a good option for younger children. Once you've filled all the letters of the title, you get a slightly more spectacular animation and an American voiceover urges you to keep on playing and complete some more challenging levels.

The games are rather basic. Huckleberry Hound's Gift Emporium is a pairs game where you match the gift boxes. The games get progressively harder, with more boxes appearing, and for extra challenge, the boxes keep moving position. Nevertheless, it's little more than a glorified version of the card game.

Yogi Bear's Pic-A-Nic Place is also a pairs game. This time you have picnic baskets, which you identify by sound. Just match the squeals and grunts...

The Flintstones' Balloon Ballyhoo has Fred clutching a net, which he uses to catch the rising balloons. You use the left and right arrow keys on the keyboard to guide Fred to the balloons. The balloons get faster and faster, but Fred only goes at one speed – so it takes you longer and longer to catch the required number of balloons. Frustrating and unrewarding.

Equally pointless is The Jetsons' Space Race, in which George Jetson catches the satellites and avoids the asteroids, guided up and down using the arrow keys. But however many times you get hit by an asteroid, you just spin round and carry on – no challenge at all. Scooby Doo's Adventure maze is merely irritating, with doors that open and close unexpectedly as Scooby Doo sniffs around the maze. The higher the level, the longer it takes to escape. Top Cat's Top Facts is just a test of your kids' cartoon knowledge – a betrayal of how much television they watch.

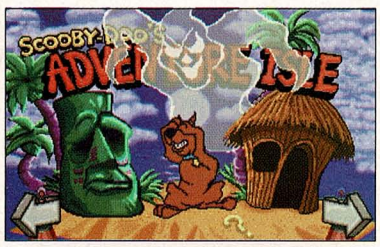
More than anything, *Cartoon Carnival* is an advert for Hanna Barbera cartoons. Each game is introduced with music from the theme tunes, and if you click on a cartoon character, a short animation is performed. There are many more enjoyable and educational games on the market – this one could only claim to improve your mouse control skills and handling arrow keys. As a parent you'll soon be driven mad by the senseless repetition and mindlessness of the games.

Discover how much telly your child watches with Top Cat's quiz. And then worry about how much 'quality time' you spend with your offspring.

Nevertheless, the kids who played it loved it. *Cartoon Carnival* has a lively, friendly quality and children immediately feel at home with such familiar songs and characters. But then, kids love junk food, crass telly programmes and staying up late – it's ultimately up to you to decide what's best for them. If you're looking for an educational game, this isn't it.

ANNABEL NNOCHIRI & EVA LAUER

Click on Yogi Bear and watch the ranger catch him in the act of raiding a picnic basket. Instant appeal and a great ad for Hanna Barbera.



Fred definitely needs to lose weight – he never moves quickly enough to catch all these balloons.

CARTOON CARNIVAL

Price: £24.99 **Out:** now.
Requires: LCII or better, 4Mb of RAM, System 7 or later, 256 colours, double-speed CD-ROM drive.
Age range: six years plus.
Contact: Philips on 0171 911 3081.

MACFORMAT RATING 55%

WHO'S ANNABEL?

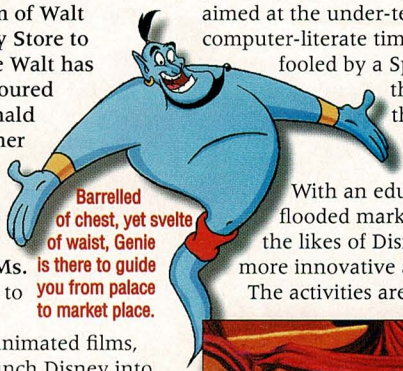
Annabel Nnochiri teaches computing at a London primary school. Faced with a class full of Macs and hordes of four to eleven year olds, she tries out as many CD-ROMs as she can get her hands on, and is always on the look out for new educational material.

Aladdin Activity Centre

He may not have nipples (true!), but he has selling power. Aladdin bounds from the silver screen onto the Mac, courtesy of Disney.

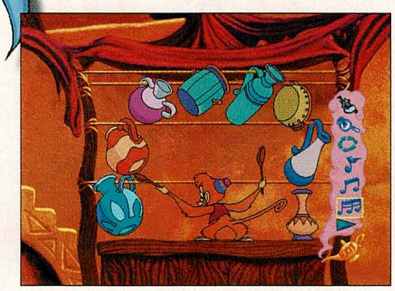
Don't touch that lamp! It quite possibly contains Mork dressed up in a big blue Michelin Man suit. Or maybe not. Tempting, isn't it?

What's in a name? A brief glance at the shelves of Toys Я Us, Blockbusters and the like reveals everything. Companies have pounced upon the marketable nature of cartoon characters, and none better than the magical kingdom of Walt Disney. From Disney Store to Disney World, Uncle Walt has slapped the four-coloured faces of Mickey, Donald and almost every other Disney character onto lunchboxes, T-shirts and, with the launch of Disney Interactive, CD-ROMs.



Barrelled of chest, yet svelte of waist, Genie is there to guide you from palace to market place.

One of the movies to re-establish Disney's hegemonic hold on animated films, *Aladdin* is ideal to launch Disney into the Mac world. Designed for children up to ten years old, *Activity Centre* looks to have all its bases covered – lush packaging, exclusive film clips – but it falls short on the content front.



Fed up with organ-grinding, Abu takes cutlery to kitchenware for some experimental drum theatre.

A little known part of a genie's repertoire is the ability to gurn at will. Clever, huh?

Genie welcomes you to the *Activity Centre* and is always on hand to guide you through the locations of Aladdin's magical kingdom – Agrabah Marketplace, the Sultan's Palace, the Cave of Wonders and the Sultan's Theatre. Each location promises a treasure chest of activities but, despite much rubbing of monitor, offers up little.

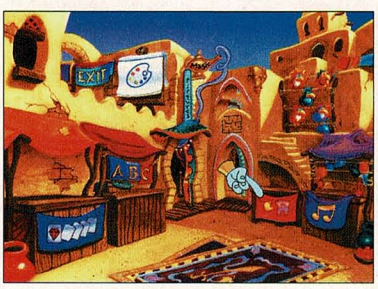
Despite the changing location, each interface contains almost identical games and puzzles. *Activity Centre* is aimed at the under-tens, but, in these computer-literate times, no child is fooled by a Spelling Challenge that's identical throughout, apart from simple cosmetic changes.

With an edutainment-flooded market, you'd expect the likes of Disney to be rather more innovative and inspiring. The activities are sure to initially transfix your kids. Genie cajoles you through a Music Mimic game (repeat the musical notes Abu makes on the vases), a Spelling Challenge and match-up games. The graphics are bright, enticing and, apart from the how-did-that-slip-through-quality-control? maze challenge, are all state of the art. The difficulty levels can be altered, procuring some longevity for this ultimately exhaustible genre title, and, surprisingly, it's only the Genie and his array of quips that irk.

The paint package, Crayon Colours, is even more impressive – full of fun tools such as the Magic Brush and a watercolours option – but just when you're feeling benevolent towards *Activity Centre*, along comes the Sultan's Theatre. Six long clips from the film await your perusal, but as the clips roll by and your popcorn dwindles, you finally realise – no Robin Williams. All the film clips have been chosen so as not to include his Morkness – the voice used for the rest of the CD being the still-amusing Dan Castanella from the cartoon show. The clips shouldn't be the main reason for buying an edutainment title, but one still feels a little cheated. As the familiar games and puzzles pop up yet again, it's an overwhelming feeling that can be summed by another company's catchphrase... Th-th-that's all, folks. **MIKE GOLDSMITH**

'Okay, so that's left at the Fountain of Youth, second right after the Sahara Bypass and...'

Aladdin by Walt Disney. Respray job courtesy of the Mitchell brothers.



'To you, I sell that rug for 100 shekels. No, make that fif– 25 is my final... Ten is all I'm ask–'

It might be a Help option, but that floating, disembodied hand just looks... spooky.

ALADDIN

Price: £44.99. **Out:** now. **Age range:** up to ten.
Requires: Quadra or better, 5Mb of RAM, System 7.1 or later, 256 colours, double-speed CD-ROM drive.
Contact: Paragon Communications Ltd on 0171 734 7040.

MACFORMAT RATING 68%

DISNEY DELIGHTS

Next off the Disney conveyor belt is the computer-animated *Toy Story*. A tale of toys that come to life, and a guaranteed smash at both box office and PC World.

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Also receiving the interactive treatment are *The Lion King*, Mickey and Donald, *Pinocchio* and Disney's latest classic adaptation to hit the screen, *Pocahontas*.

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Descent - 30 off world mining colonies have been invaded by an unknown force. Intelligence reports suggest the colonies have by overrun by mining droids, reprogrammed by the alien invaders. You're dispatched with a small fighter craft to navigate the mining tunnels, rescue any miners still alive and then destroy what's left. More subtle than Doom, yet much more action. On CD. Please call for pricing.

Full Throttle - Motorcycles, mayhem and murder in this new graphic adventure from Lucas Arts. One minute you're on the road roading. Next minute some guy in a suit comes along - says he's got a deal for you. When you come to, you've got a lump on your head, the law on your back, and a feeling in your gut that the road you're on is about to get a lot tougher. Available on CD at £32.95

Power Pete - armed with an arsenal of toy shop weapons from toothpaste guns to exploding birthday cakes, you must mow down the evil toys while delivering captured fuzzy bunnies to safety. Fur will fly as you travel through 15 levels of arcde action in five spectacular toy lands in this Sega-style game complete with speech and stereo sound track. Power Pete is available on CD at £25.95.

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SHAREWARE AND PD

Another feast of shareware for the New Year. We couldn't find a hangover cure program, but this lot might alleviate your suffering.

All the shareware featured here and more is on our covermounted CD-ROM

Downloading shareware is becoming a bit of an anti-social pastime these days. You have to get up early in the morning to download those big shareware files and demos before North America wakes up and the Internet slows to a crawl. Still, it could be worse – when the files do take over an hour to download in the afternoon, at least the pubs are open and full of friendly Disc Editors!

Ultra-Dice

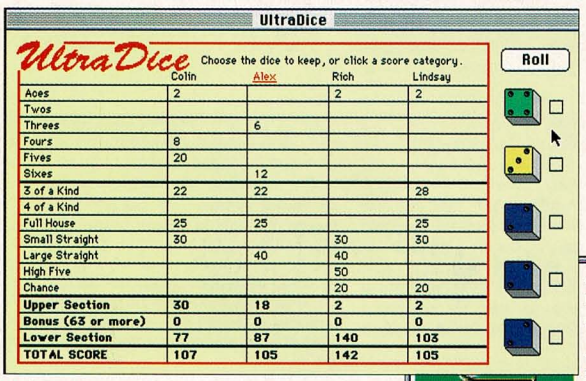
GAME

Shareware, registration fee $15

Yahtzee is probably the world's favourite dice game and *Ultra-Dice* is an excellent adaptation of this classic. The premise of *Yahtzee* is that you roll five dice with the aim of getting certain combinations, such as five-of-a-kind. You gain points according to the dice combination you get and lose points if you fail to get a suitable set.

Ultra-Dice greets you with a screen to select the number of players and enter their names. If you're a lonely soul, you can play against virtual friends who live inside your Mac. As soon as you start the game, five dice frantically roll around your screen. When they come to a halt you have to select which, if any, are worth holding onto and which you want to discard. This is done by clicking the check boxes next to the dice you want to keep. You have three attempts to try and make a match with one of the options available on the scorecard. Each time it's your turn you must enter a score. Failing to match any of the options means you will have to enter a zero against one of the dice combinations, which should obviously be the one you think you're least likely to get. The person with the highest score at the end of the game is the winner.

While it's not the most challenging game in the world, *Ultra-Dice* can be played by almost anyone and you don't have to scrabble under the sofa to find the dice. And it makes scoring easier than in the original board game.



	Colin	Alex	Rich	Lindsay
Aces	2		2	2
Twos				
Threes		6		
Fours	8			
Fives	20			
Sixes		12		
3 of a Kind	22	22		28
4 of a Kind				
Full House	25	25		25
Small Straight	30		30	30
Large Straight		40	40	
High Five			50	
Chance			20	20
Upper Section	**30**	**18**	**2**	**2**
Bonus (63 or more)	**0**	**0**	**0**	**0**
Lower Section	**77**	**87**	**140**	**103**
TOTAL SCORE	**107**	**105**	**142**	**105**

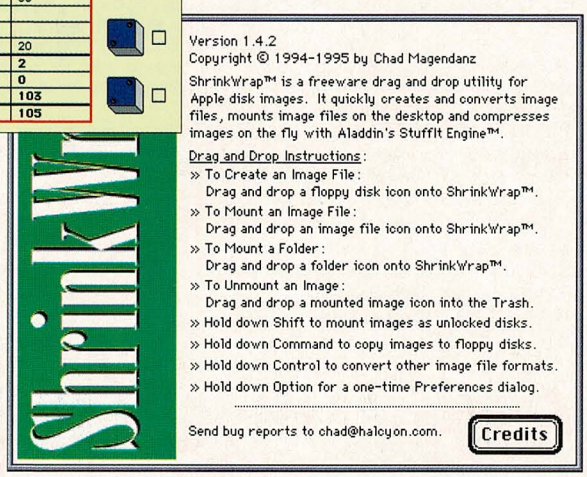
You may know of the dice game *Craps*. Here's another dice game, *UltraDice*, and it's pretty good!

ShrinkWrap 1.4.1

COMPRESSION UTILITY

Freeware

Even if you don't usually bother with utilities, this is one you should definitely have a look at. *ShrinkWrap* has many functions. First, it enables you to create exact copies of floppy disks.


Version 1.4.2
Copyright © 1994-1995 by Chad Magendanz
ShrinkWrap™ is a freeware drag and drop utility for Apple disk images. It quickly creates and converts image files, mounts image files on the desktop and compresses images on the fly with Aladdin's StuffIt Engine™.
Drag and Drop Instructions:
» To Create an Image File:
Drag and drop a floppy disk icon onto ShrinkWrap™.
» To Mount an Image File:
Drag and drop an image file icon onto ShrinkWrap™.
» To Mount a Folder:
Drag and drop a folder icon onto ShrinkWrap™.
» To Unmount an Image:
Drag and drop a mounted image icon into the Trash.
» Hold down Shift to mount images as unlocked disks.
» Hold down Command to copy images to floppy disks.
» Hold down Control to convert other image file formats.
» Hold down Option for a one-time Preferences dialog.
Send bug reports to chad@halcyon.com.
Credits

No, *ShrinkWrap* isn't the plastic wrapping around the veggies at the supermarket – it's actually a versatile disk handling utility.

When you copy a floppy simply by dragging, the result is not an exact duplicate of the original – things like the name of the disk, the positions of the icons, and other, more subtle elements, are different. Using *ShrinkWrap*, you can create exact duplicates simply by dragging and dropping your floppy disk icons onto the *ShrinkWrap* icon.

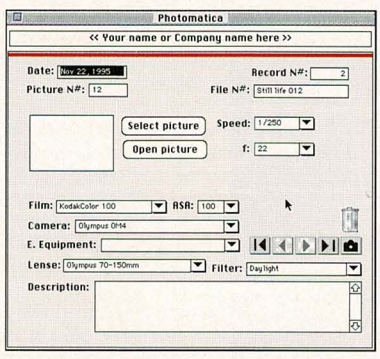
Another useful feature of *ShrinkWrap* is automatic decompression of *StuffIt* files. Drag the compressed files onto the *ShrinkWrap* icon and, as if by magic, the file will be decompressed in a matter of seconds. Better still, if you ever use the Internet to download files, you have to convert the files before you can use them. *ShrinkWrap* can take care of that as well – with a simple drag and drop operation, a garbled mess of numbers is transformed into a useable program. This is a very handy utility, and, best of all, it's distributed as freeware.

PhotoMatica 1.2.1

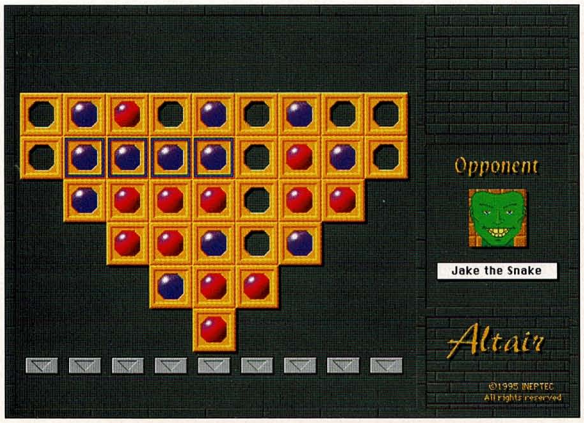
PHOTO LOGGING DATABASE

Shareware, registration fee $20

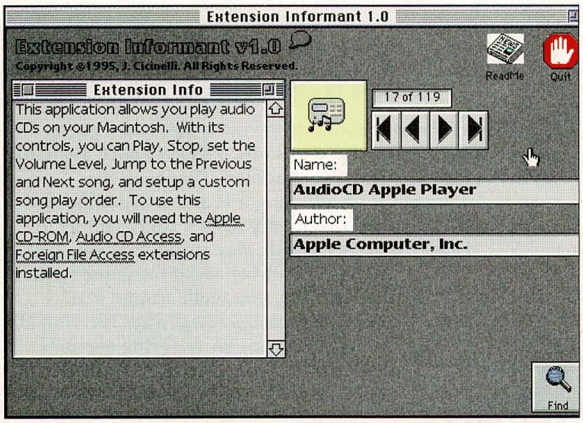
PhotoMatica is a relational database tool for photographers to keep track of their pictures and negatives. When you start up *PhotoMatica*, you're presented with a database window which is laid out to enable you to enter every conceivable detail about the photograph you want to store. Included are details of film type, camera and lens, and an area in which you can write a



You can keep a record of every detail about your photographic collection with *PhotoMatica*.



Altair is a computerised and more challenging version of *Connect 4*. You'll need your wits about you to win against the likes of Jake the Snake.


Extension Informant 1.0
Extension Informant v1.0
Copyright ©1995, J. Cicinelli. All Rights Reserved.
ReadMe
Quit
Extension Info
This application allows you play audio CDs on your Macintosh. With its controls, you can Play, Stop, set the Volume Level, Jump to the Previous and Next song, and setup a custom song play order. To use this application, you will need the Apple CD-ROM, Audio CD Access, and Foreign File Access extensions installed.
17 of 119
Name:
AudioCD Apple Player
Author:
Apple Computer, Inc.
Find

Not a program to let you know which pub is open the latest, *Extension Informant* actually tells you what's going on inside your Mac.

description of the image. If the picture is stored in PhotoCD format, you can include a thumbnail image.

The unregistered version only enables you to store 25 pictures, which isn't really enough to get a proper feel for the program's capabilities. You may find *PhotoMatica* a bit specialised in terms of the level of detail it stores, but if you have a lot of photographs and you need to keep track of them, this program keeps vital, detailed information stored in an easily accessible format.

Altair 2.0

GAME

Shareware, registration fee $10

There have been a couple of Mac versions of the board game *Connect 4*. *Altair* does more of the same, but offers a few differences too. The idea is to get four of your counters in a diagonal, horizontal or vertical row before your opponent does – a glorified version of noughts and crosses, in other words. You drop your counter into one of the grid's columns and it falls into the lowest space available.

There are four different standards of opponents for you to challenge – Barzo the Clown is the only one who's easy to beat. To win against the more advanced players you'll need to have your wits about you – after all, this is a computer you're competing with, so it's got all angles covered.

The main difference between this version and others is that rather than just the simple rectangular grid you normally play on, you can choose from a range of boards. The different shapes dictate which tactics you should employ. The graphics are professionally drawn, and the challenge factor is high – which means the computer usually wins! So, if you like *Connect 4*, you'll no doubt spend many hours perfecting your technique with *Altair*. And if you become good enough to beat *Altair* more often than it beats you, you're sure to be able to successfully take on any mere mortal with the original game.

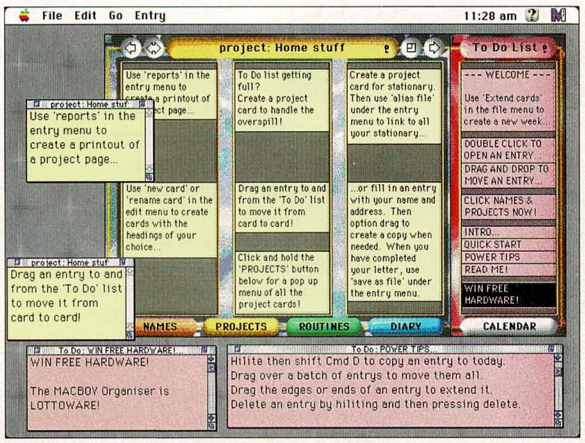
Extension Informant 1.0

UTILITY

Shareware, registration fee $10

Extensions are an important part of Mac life, so it's not a bad idea to actually know which ones are loading on your Mac each time you boot up. *Extension Informant* is a *HyperCard*-based package which gives you the rundown on 119 different Extensions. You can just browse through the catalogue or run a search to get details on a specific Extension. With the help of *Extension Informant*, you may find that you're loading Extensions you never actually use – removing them will save you valuable RAM and your Mac will boot up faster. Another helpful feature is the use of AppleScript to link the program to your Extensions folder, so you can access your Extensions without having to go through the Finder.

The idea of *Extension Informant* is a good one, but it's slightly let down by the fact that it only supports a limited number of Extensions – those written by Apple. It would be impossible to support every Extension ever written, but perhaps if the author gets enough people registering, the incentive will be there to expand the program to incorporate third party Extensions.


File Edit Go Entry
11:28 am
project: Home stuff
To Do List
--- WELCOME ---
Use 'reports' in the entry menu to create a printout of a project page...
To Do list getting full? Create a project card to handle the overspill!
Create a project card for stationary. Then use 'alias file' under the entry menu to link to all your stationary...
Use 'Extend cards' in the file menu to create a new week...
DOUBLE CLICK TO OPEN AN ENTRY...
DRAG AND DROP TO MOVE AN ENTRY...
CLICK NAMES & PROJECTS NOW!
INTRO...
QUICK START
POWER TIPS
READ ME!
WIN FREE HARDWARE!
Use 'new card' or 'rename card' in the edit menu to create cards with the headings of your choice...
Drag an entry to and from the 'To Do' list to move it from card to card!
...or fill in an entry with your name and address. Then option drag to create a copy when needed. When you have completed your letter, use 'save as file' under the entry menu.
Drag an entry to and from the 'To Do' list to move it from card to card!
Click and hold the 'PROJECTS' button below for a pop up menu of all the project cards!
NAMES
PROJECTS
ROUTINES
DIARY
CALENDAR
To Do: WIN FREE HARDWARE!
WIN FREE HARDWARE!
The MACBOY Organiser is LOTTOWARE!
To Do: POWER TIPS...
Hilite then shift Cmd D to copy an entry to today.
Drag over a batch of entrys to move them all.
Drag the edges or ends of an entry to extend it.
Delete an entry by hilighting and then pressing delete.

Now you can get your life in order, thanks to the easy-to-use *MACBOY Organiser*. Don't worry if you're a girl, you can use it too.

MACBOY Organiser

UTILITY

Shareware, registration fee £10

The *MACBOY Organiser* was sent in to MACFORMAT exclusively, so this is a world premiere. As organisers go, this offers everything you're likely to need at a bargain basement price. A clear interface gives you quick access to a whole range of facilities, including a diary, notes, reminders, to-do lists, names, phone numbers, addresses and so on. You can also automatically open documents and linked applications,

Continued on next page

CONFUSED ABOUT SHAREWARE?

■ **Shareware** is a form of 'try before you buy' software selling and it's a great idea so long as you're honest. When you get some shareware, the documentation file accompanying it will tell you how much it costs – typically it's somewhere between US$5 and $40 – and where to send your money. If you like the software and decide to keep it, then you're morally obliged to cough up. Not only do you get the satisfaction of boasting to friends about how honest you are, but the author will often give you something in return for registering, like a printed manual, or updates when released. The most common problem is sending money abroad, but as many shareware authors now accept credit cards, it's getting easier.

■ **Freeware** means that you don't have to pay for it at all. There are many derivations, such as postcardware, which means you have to send a pretty postcard to the author.

But freeware is not strictly the same as **Public Domain** (PD) because although you don't pay for freeware, the author keeps copyright and you have to follow his terms and conditions to use the program. This often means keeping all the files together and not using or selling them for profit.

Doom

GAME

Shareware, $9 suggested registration fee

The original *Doom* was one of the most successful games ever to appear on the PC, but sadly it's never been available on the Mac as a commercial package. Thanks to the wonderful people at id software, it is at last available as a shareware version which only costs a suggested $9 to register (in other words, pay as much as you can).

If you know nothing about the game (where have you been?), you walk around a 3D world of halls and passageways meeting all sorts of machine gun wielding enemies along the way – and some of them are really ugly. It's you or them, so make sure you've got plenty of ammunition and kill just about everything that moves. You'll need to be quick off the mark as you progress through the levels and the evil hordes multiply.

The reason *Doom* has been so successful is because it's more than just a blast-'em-up – you have to use strategy to reach the next level and progress through the game. Another small but important aspect is that you don't have to be a contortionist to handle the controls. A few keys for movement and the mouse for firing are all you need to blast away the dreaded foes. And if you really want to have some fun, try playing *Doom* over a network with a friend or two – you'll soon be totally addicted.

It's all action as you shoot through the shareware version of *Doom*.

You need a powerful Mac to get the most out of *Doom's* gameplay and graphics. The minimum system you can play it on is an LC475 with at least 4.4Mb of free RAM.

which is useful for quick access to relevant documents.

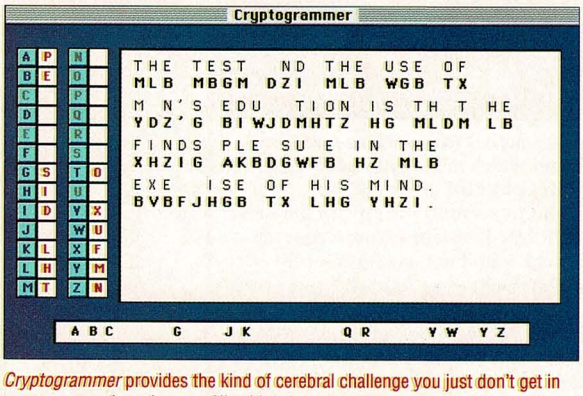
The real beauty of this organiser is its simplicity – it is literally a matter of a double-click on an entry to open it and a double-click on the background to open a new entry. Clicking and dragging the centre of an entry enables you to move it and organise your information, or you can click and drag the edges of an entry to enlarge it. The entries appear in windows which look very similar to Post-it™ notes (or 'stickies' as System 7.5 users might call them), which gives them a familiar feel. When you minimise the organiser, a small Control Panel stays open so you can still access your records without hogging too much Desktop space or RAM. As always with personal organisers, it will take you a while to enter all your details initially, but the effort is well worthwhile – although you won't have an excuse for forgetting anything ever again!

Cryptogrammer 1.1

PUZZLE GAME

Shareware, registration fee $5

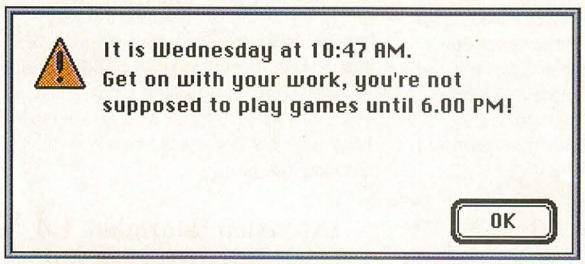
Cryptogrammer will test your thinking power to the full. It's a puzzle game, in which you solve a coded phrase or saying, where each letter is represented by a different letter – like the codes used in World War II.


Cryptogrammer
THE TEST ND THE USE OF
MLB MBGM DZI MLB WGB TX
M N'S EDU TION IS TH T HE
YDZ'G BIWJDMHTZ HG MLDM LB
FINDS PLE SU E IN THE
XHZIG AKBDGWFB HZ MLB
EXE ISE OF HIS MIND.
BVBFJHGB TX LHG YHZI.
A B C G J K Q R Y W Y Z

Cryptogrammer provides the kind of cerebral challenge you just don't get in your average shoot-'em-up. Nice idea, but it'll never catch on.

To solve the code, you are given two boxes full of letters. Click on a letter in the box with coloured buttons and then click on the letter you think it represents in the other box. As you fill in letters in the cryptogram, they appear automatically above the letters that represent them.

To make the phrase more readable punctuation is included from the start, but don't think this is going to make it easy. There is a clue option, however, which gives you one of the letters from the phrase each time you use it. You can also list the letters in order of frequency, so you can make guesses based on how often the letters occur – did you know that 'e' is the most commonly occurring letter in the English language? The game is simple to play but difficult to complete – perfect if you want to spend the rest of your life struggling with cryptic puzzles.



Just when you thought it was safe to have a quick game, *Addiction Manager* takes over where the boss left off.

Addiction Manager

UTILITY

Freeware

Every so often you see a piece of software that has such an enticing name, you can't resist checking it out. They usually have the word 'sex' or 'nude' in the title, but not this time. Drugs and solvent based products aren't the issue either; it's all good clean stuff here. The aim of *Addiction Manager* is to wean you off computer games by restricting your access to them to certain pre-defined periods.

You do this by dragging your game icon onto the *Addiction Manager* icon. A text box appears into which you type the times you want access barred to this life-threatening game. You can also enter a message to remind you that you should be doing something more useful than playing games. An alias of the original file is then created.

Now you're supposed to hide all the original files and icons or even make them invisible with *ResEdit* (a bit risky, perhaps). That way you can only access the files via your restricted aliases. It's not a bad idea, particularly if you want to bar other people, but, realistically, if you're a compulsive game player you're hardly going to bar yourself – you'll probably just track down the original file and get round it somehow. Still, you might suffer a pang of guilt at having to make such an effort just to play a game.

Eclipse 3

SCREEN SAVER

Shareware, registration fee $15

Possibly the best shareware house around has brought out another great program. Ambrosia found fame with their remakes of classic arcade games, but this time it's a screen saver that hits the world of shareware.

Eclipse 3 gives you a variety of options to choose from. You can dim

Memo Buddy

UTILITY

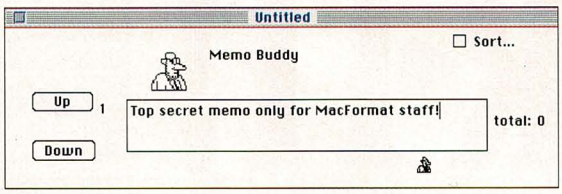
Shareware, $10 suggested registration fee

Memo Buddy is supposed to be a handy way of keeping text for copying and pasting into memos and other often repeated documents. You keep your 100 top phrases stored in *Memo Buddy* and copy them into your documents as and when you require them. All well and good, but you can do this sort of thing without cramming an extra 500K or so onto your hard disk. That may not be a lot of space in these days of Gigabyte hard disks, but it all adds up to those of us who struggle along on more modest systems. The point is, why would you really want to have 100 phrases stored on your disk? It must be easier to just use the Scrapbook, which is part of the System software, or, if you want to go completely mad, you can even write original phrases for each memo.

One failing of the program is the window re-size option. It's not that the option isn't there, it's just that if you try to re-size the window in *Memo Buddy* the text doesn't reflow with it, so you're left with a small window and text you can't see.

If you feel you really can't live without a catalogue of phrases, the alternative to messing around with *Memo Buddy* is to use a *SimpleText* document and hit **[return]** after each separate phrase. It's no more demanding than using *Memo Buddy,* and at least with *SimpleText* you can change the size of the window to one that suits you (you won't be limited to the arbitrary figure of 100 lines of text either). It's not that *Memo Buddy* is the worst program you'll ever meet, it just that it doesn't do anything particularly special. You can do the same thing equally well (if not better) with numerous other programs, some of which come free of charge on every Mac.

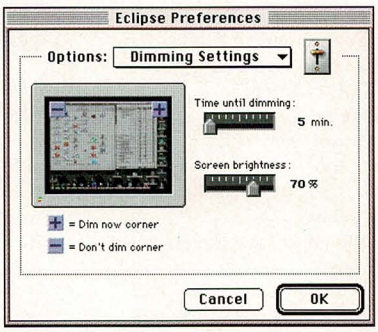
Shareware should be about bringing software to the world which is genuinely useful or sorts out those little details which commercial developers have perhaps overlooked. *Memo Buddy* achieves neither.



The nice cursor icon is possibly the best feature in *Memo Buddy.*

the screen, play QuickTime movies, show a collection of images in a slide show or display the date and time. Unlike the usual memory hungry software that's around, *Eclipse* runs on only 90K of RAM and takes up less than 200K of hard drive space. If you want to make your Mac secure when you're away from the desk, *Eclipse* also has security features which provide password and tampering protection. If someone tries to use your Mac while you're not about, you get an alert message telling you when the unauthorised access was attempted.

Screen savers were originally devised to prevent damage to your screen, which isn't really an issue any more. As screen savers go, *Eclipse* is a sound choice, although it's not as much fun as having a cartoon of someone sitting on a flying toilet seat zipping across the screen. The security features are useful if you want to keep your work private while you go to the loo, and the low memory overhead will certainly appeal to anyone who is short of RAM.



Protect your Mac from the dangers of screen damage every time you pop off to the loo.

Xiola

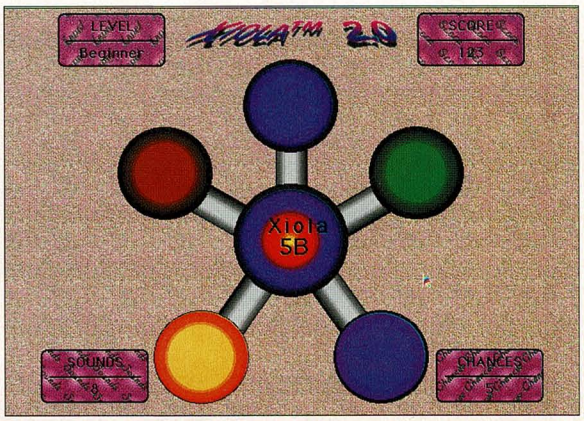
GAME

Shareware, registration fee $15

A few years ago, when computers were in their infancy, you could go down to your local toyshop and pay about £60 for a plastic box with five coloured buttons. This wonder of modern technology was known as Simon. For your sixty quid Simon would flash his buttons and burp at you in a seemingly random sequence – your job was to repeat the same sequence by tapping the buttons on your plastic pal.

You may be wondering where all this is leading – well, surprise, surprise, there is now a Mac version of Simon called *Xiola.* Martin would have been a better name really, much more memorable and easier to say. After all, Simon was memorable, so why shouldn't Martin be? Anyway, *Xiola* is much more versatile than Simon ever was. For a start, you can play on a wide range of different boards. To keep morale up, he congratulates you when you get the combination right – but he scowls at you when you get it wrong.

The game is initially quite fun, but you'll lose interest rapidly. Apparently the game was created for children to encourage them to explore and expand their young minds. Whether it does this or has any lasting appeal is doubtful, and for a shareware fee of $15 you should certainly get something more exciting. **MF**



Lots of pretty coloured flashing lights are in store with the memory challenger *Xiola.*

WHERE TO FIND THIS MONTH'S SELECTION

We often get calls from readers who want to know how to get hold of some of the shareware reviewed in these pages. Well, here are some of the methods:

1. Buy the CD-ROM edition of MACFORMAT: all the shareware we review in each issue is on there in a separate folder. There's also loads of other shareware on the CD-ROM every issue, conveniently sorted into separate categories for you.

2. Write to a shareware dealer; they occasionally advertise in the back of MACFORMAT. The dealer should have the program you're looking for, especially if he subscribes to our CD-ROM edition!

3. Use the Internet, if you have access. One of the best sources around is Imperial College at **src.doc.ic.ac.uk.** Use ftp to connect (login: anonymous; password: your e-mail address) and cd to computing/systems/mac. Round here we use the umich directory, but the sumex directory is fine as well.

4. Local user groups often have libraries of shareware. Take a look at our Reader Ads section (page 129) to see if there's one near you.

Wherever you get your shareware, beware of viruses. At the moment, *Disinfectant 3.6* (on the MACFORMAT CD-ROM) is the best and cheapest way of staying safe.

MACFORMAT OFFERS

MACFORMAT offers you the best Mac products at the best prices. All prices include VAT and delivery – no hidden extras! Don't miss out on some great deals – order now by mail or phone 01225 822511.

COLOR-IT!™

Version 3.0.4

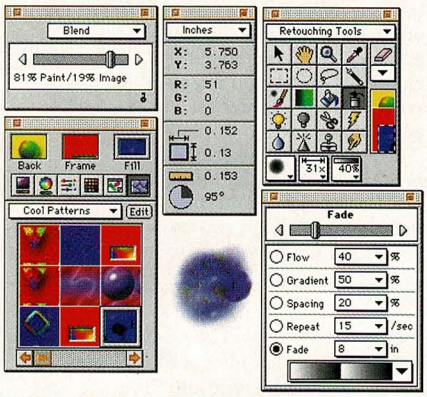
3.0.4 special upgrade offer

We gave away *Color It! 2.3.5* on MACFORMAT 31's Cover CD-ROM and floppy disk (and if you missed it, see over the page to order your copy). Now we bring you the exclusive chance to upgrade to the NEW *Color It! 3.0.4*, to give you image editing features that are on a par with those of the mighty industry standard, *Photoshop*. This latest version of *Color It!* offers a range of new, powerful features, including:

- Fully-native PowerPC version
- CMYK four-colour separation
- RGB channel editing
- Extrude and drop shadow filters
- User-defined Undo levels (up to 16)
- Levels and Curves filters
- Unsharp Masking filters
- Bezier Brush tool
- Kernel Brush tool
- Crop tool
- Live filter previews
- Palettes combined to save screen space

...and much more.

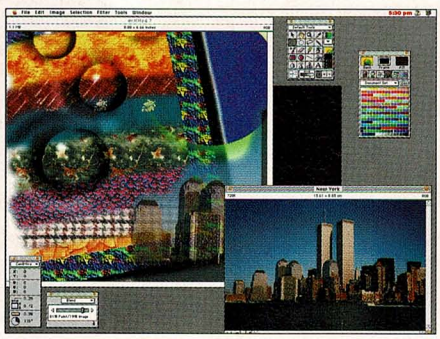
Color It! has come a long way – version 3.0.2 rated a storming 88% in MACFORMAT 28. So



If *Photoshop* is beyond your budget, then the latest version of *Color It!* is a serious alternative.

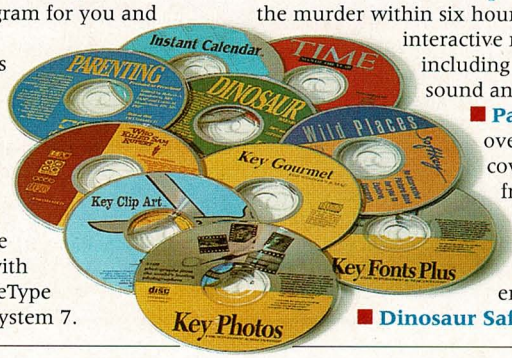
don't miss out on this opportunity. Available nowhere else in the United Kingdom, the *Color It! 3.0.4* upgrade offer is available from MACFORMAT for a limited period only. It can be yours for only £44.95, inclusive of delivery and VAT.

Price: £44.95
Order code: MCFCT3



SoftKey Ten CD Pack – ten CDs for only £29.95!
Fonts, clip art, games, edutainment, and more

- **Key Home Gourmet.** A sophisticated and powerful cooking program for you and your Mac.
- **Key Clip Art.** Gives you a library of 5,000 quality TIFF images to copy into your own documents.
- **Key Fonts Plus.** 303 fonts to enhance your documents. These fonts are compatible with the PostScript and TrueType format supported by System 7.



- **Who Killed Sam Rupert?** Can you solve the murder within six hours? This game uses interactive multimedia, including full motion video, sound and animation.
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- **Dinosaur Safari.** Find out all about dinosaurs, geography, flora, fauna and geology. It's an interactive learning game that the kids are bound to love.
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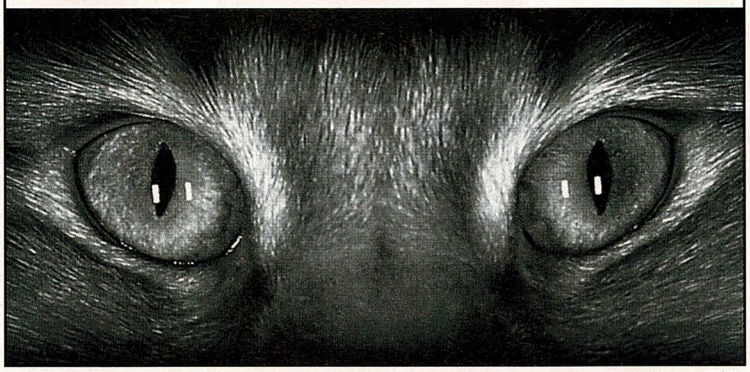
C•A•T 4



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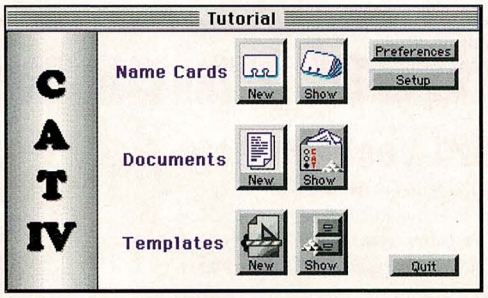

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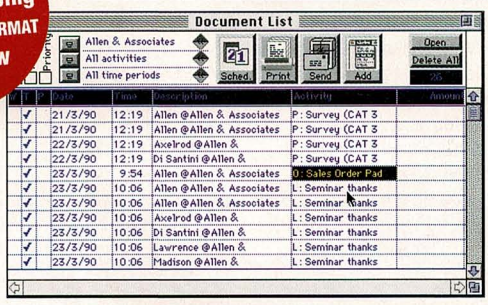
C•A•T 4 rated a whopping 81% in MACFORMAT 32's review

C•A•T 4 is an off-the-shelf relational database offering word processor, DTP and spreadsheet functionality – it's the ultimate contact manager for your company, and can be tailored to meet your specific needs. It can even create documents linked to its built-in time management feature.

C•A•T 4 offers seriously impressive filing and retrieving abilities. All the documents (letters, invoices, call logs, etc) that you create are filed automatically by time and date, to each contact you communicate with. This enables you to review, at any time, a full history or single item of correspondence with any company or individual. Anyone with professional, business, or personal requirements can benefit significantly from *C•A•T's* ability to display all your communications quickly and easily, whether written, spoken or faxed.

Because the software is so versatile, a customised solution can be developed cost effectively to suit any business no matter how large or small. All it requires is the production of document templates specific to the job function. Examples of what it can successfully manage include:

- Sales & marketing tracking
- Architecture project management
- Time and job costing recording
- BS5750 administration control
- Designer job bag system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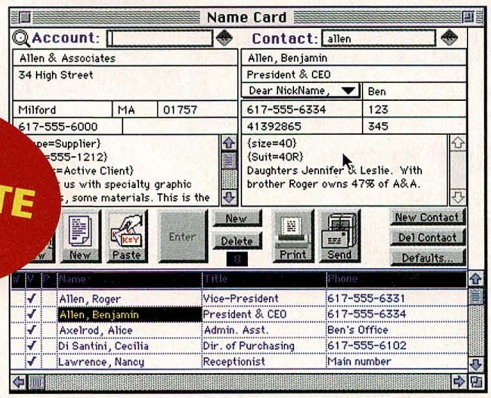

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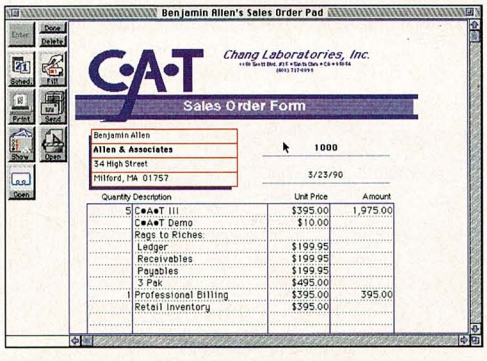
There's a 90-day fully functional version of *C•A•T 4* on MACFORMAT 32's Cover CD, so you can take a look for yourself to see just how powerful the software can be.

Free template design!

To ensure that you get started with *C•A•T* quickly and with a minimum of fuss, the makers of *C•A•T* are offering two hours of free template design for every new MACFORMAT buyer who purchases the full version. Simply fax over your template designs and they will be put together and returned on disk.

Once you have *C•A•T* installed, you will never again have an excuse for missing an appointment or deadline, leaving invoices long overdue, forgetting to make a follow-up call, or losing correspondence. With *C•A•T* organising your administration you'll see increased efficiency and profitability almost immediately. Take advantage of this special MACFORMAT offer and you can buy *C•A•T* for only £189 – a saving of more than £33 on the normal selling price. You'll also be able to make use of the *free* template design service to set *C•A•T* up to work the way you want.



C•A•T 4 **Order code: MCFCAT4** **Price: £189**

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Great value with our KPT Offers

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(MACFORMAT 29: 92%)
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KPT Vector Effects **Price: £116.32**
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KPT Power Photos

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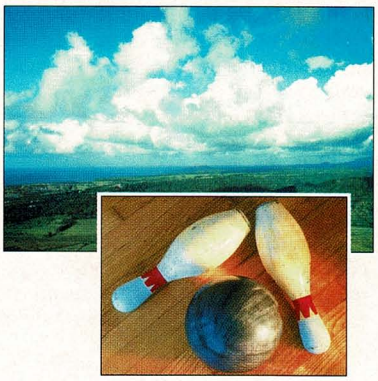
(MACFORMAT 28: 89%)
This excellent collection of high resolution photos features 500 images, across a total of ten CDs. Each photo is provided in TIFF format, making it compatible with almost all programs. At resolutions of 2,048 x 3,078, the photos can be used at A4 size, providing stunning and interesting pictures, suitable for all users, from home to professional. For a complete review, see MACFORMAT 28, where it received a rating of 89%!



KPT Power Photos
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(MACFORMAT 20: 91%)
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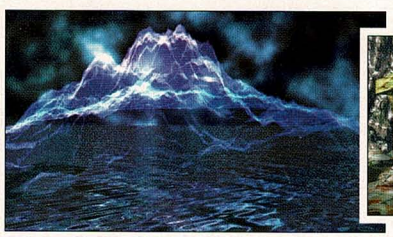
Once you've started to use this software you'll be unable to stop creating wonderful graphics – it's that compulsive. Reviewed in MACFORMAT 20, *KPT Bryce* scored an impressive 91%. *KPT Bryce* requires an LCII or better, 4Mb of free RAM, and System 7 or later.

KPT Bryce **Price: £115.00** **Order code: MFKPT**



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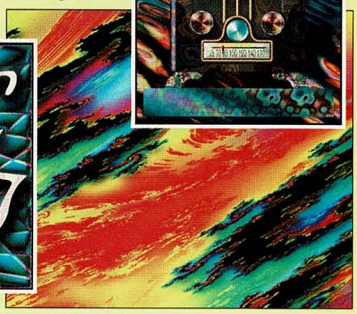

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ISSUE 21

February 1995

■ **On the disks:** *VideoShop 2.0;* plus 3Mb of games and utilities; *Trojka; WordSmith* and shareware

■ **On the CD-ROM:** sorry, the CD-ROM edition is no longer available

■ **Inside:** video editing on Macs: how to do it; budget games; and what to buy if you run out of disk space

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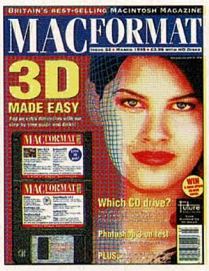

ISSUE 22

March 1995

■ **On the disks:** *Infini-D* demo; *MacConcept; Blobbo*

■ **On the CD-ROM:** 3D spectacular; *The Crystal Rainforest; VideoFusion*

■ **Inside:** how to create 3D images on your Mac; *Photoshop 3.0* reviewed; font problems solved; CD-ROM drives tested; and the most realistic flight sim ever

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ISSUE 23

April 1995

■ **On the disk:** *Oh-no! More Lemmings; StuffIt Lite 3.5*

■ **On the CD-ROM:** comics collection; *PAWS; Sources of Faith; Marathon*

■ **Inside:** comics on the Mac – interviews, reviews and how-to's; *FreeHand* vs *Illustrator;* colour printers; reviews of *XRes* and the best Mac game ever – *Marathon*

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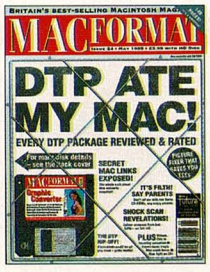

ISSUE 24

May 1995

■ **On the disk:** *Graphic Converter; MacCheckers!*

■ **On the CD-ROM:** demos of five top DTP programs, including *QuarkXPress* and *PageMaker,* plus *Photoshop 3.0* and *ClarisWorks 3.0*

■ **Inside:** every Mac DTP package reviewed and rated; colour scanners; networks explained; *PhotoFix* reviewed

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HD Disk MFHD24

ISSUE 25

June 1995

■ **On the disk:** *Knot 1; MacSnails; Glypha 3, TypeIt4Me, Electric Poet* and MIDI files

■ **On the CD-ROM:** sorry, the CD-ROM edition is no longer available.

■ **Inside:** all you need to know about PowerMacs, fax-modems tested; plus some 'Cosmic' CD-ROMs

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ISSUE 26

July 1995

■ **On the disk:** animation programs, *Disinfectant 3.6*

■ **On the CD-ROM:** demos of *ProMotion, Amazing Animation, Elastic Reality, Morph* and *Circus,* plus *3D Dinosaur Adventure.*

■ **Inside:** animation on the Mac; 15- and 17-inch monitors reviewed; comms made easy with *TeleFinder*

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HD Disk MFHD26

ISSUE 27

August 1995

■ **On the disk:** *Anagrams, Word Breaker, Smart Calendar, Xearth* and *BattleTanks*

■ **On the CD-ROM:** sorry, the CD-ROM edition is no longer available

■ **Inside:** the complete guide to portable Macs; Internet basics series; plus portable printers reviewed.

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HD Disk MFHD27

ISSUE 28

September 1995

■ **On the disk:** *Catch The Buzz, Lobster, DragThing.*

■ **On the CD-ROM:** *Color It!, Dark Forces, Circle Elements* and *WorldWrite* demos, plus over 75 high-res clip photos.

■ **Inside:** image editing; what those Extensions and Control Panels *do*; graphics tablets, PaperPort scanner and *Dark Forces* reviewed.

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HD Disk MFHD28

ISSUE 29

October 1995

■ **On the disk:** clip art, games and utilities, fonts.

■ **On the CD-ROM:** clip art, 55 high res photos, Bomb Busters, *Discworld* demo.

■ **Inside:** eye-catching black-and-white DTP; clip art collections, *KPT Vector Effects,* language learning software and multimedia encyclopaedias reviewed.

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CD-ROM MFCD29
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ISSUE 30

November 1995

■ **On the disk:** *MacPipes, MacQubic, Gossamer.*

■ **On the CD-ROM:** HTML authoring software, *QuickEditor,* QuickTime 2.1, *SmartSketch* demo.

■ **Inside:** publishing on the Net and CD-ROM, QuickTime utilities, *Alone in the Dark, SmartSketch,* input devices – alternatives to the mouse.

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ISSUE 31

December 1995
Double-disc special!

■ **On two disks:** *Color It! 2.3.5* – full version, *Factory*

■ **On two CD-ROMs:** *Color It! 2.3.5* plus fonts, clip art, and more. *Acrobat Reader.*

■ **Inside:** 50 ways to make your Mac run faster, *ClarisWorks 4, Doom 2, SoftWindows,* personal organisers, programming.

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HD Disk MFHD31

ISSUE 32

Christmas 1995

■ **On the disk:** *Pentominoes, Frog Xing, Xmas Lights, FindText 1.3,* utilities.

■ **On the CD-ROM:** *Marathon 2,* QuickTime VR, *C•A•T 4,* art software, multimedia.

■ **Inside:** create great art on your Mac, the new range of PowerMacs, *PageMaker 6,* kids' multimedia, *Wing Commander 3.*

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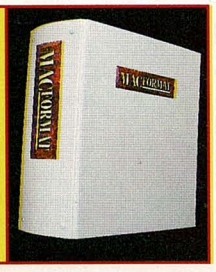

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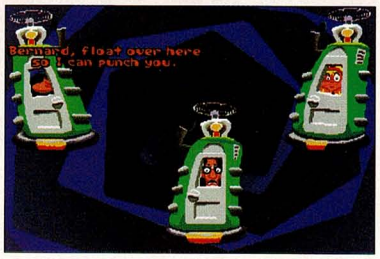
Day of the Tentacle

'I'm stuck in colonial times, tentacles are taking over the world, and now the toilet's backing up.' Things are tough for Hoagie and pals. Jillian Werb sympathises.



The team whizzing through time in the Chron-O-John. (Technology patented by Dr Red Edison, you'll be pleased to know.)

Picture the scene. You're deeply engrossed in playing *Day of the Tentacle*. A colleague wanders over, attracted by the bold graphics, daft voices, and pastiche elevator music, and idly inquires, 'So what's going on here then?'

'Well, that's easy. Once you've got the red paint and a paintbrush, you can paint the kumquats on the kumquat tree red, so that George Washington thinks it's a cherry tree and chops it down, so Laverne doesn't get stuck in the tree 400 years later.'

'Ah, of course.' There's a short pause while you switch to Bernard and get him to use a jemmy with a dime that's stuck in a wad of chewing gum on the floor. 'And what are you going to do with the dime, exactly?'

You think carefully, decide to go for the short answer, and take a deep breath. 'I need the dime to put in the FickleFingers machine in the Honeymoon Suite, upstairs. That'll start the bed vibrating, so that the conventioneer who's sleeping on it rolls over slightly. Then I can take the jumper that he's no longer sleeping on, and put it in the dryer downstairs. I'll put all the quarters (which I got by jemmying open the candy machine) into the dryer's coin slot, which should keep the dryer running for a few centuries. Laverne, who's 200 years in the future, will discover the jumper in there just at the end of its drying cycle, and it'll have shrunk to the right size for the hamster, which she'll find completely frozen in the freezer...' You pause thoughtfully. 'Of course, she'll have to defrost him in the microwave before she can put the jumper on him. Once she's done all *that*, she can put him back in the hamster generator...'

Your colleague looks bemused and asks no more questions. The rest of the office look at you strangely.

Sense of the ridiculous

Day of the Tentacle basks in a sense of the ridiculous. The plot? Purple Tentacle has developed megalomaniacal tendencies and has plans for world domination. Our three heroes try to stop him by commandeering Dr Fred's time machines (Chron-O-Johns) and end up stranded in three different time periods. They each have to somehow get their time machines working again, although you'll be pleased to know that they can use the Chron-O-Johns to flush small inanimate objects to each other through time. It's your average day-to-day story of friendship, bravery, destructive tendencies and obtuse tentacles.

What exactly *is* it that makes *Day of the Tentacle* one of the most addictive, funny, successful, annoying games ever? The fiendishly clever puzzles? The garish, manic cartoons? The bizarre, compulsive sense of humour? The ludicrously spot-on characters? The one-liners? The fact that the programmers have catered with humour and originality for every eventuality? Overwhelmingly, it's all of the above.

The puzzles are intricate, bizarre and sometimes downright lateral. You can take it as read that every so often you're going to get completely stuck, and it doesn't help knowing that you've been given all the clues you need – you're just not thinking along the same bizarre lines as the story writers. The old ploy of 'using' everything with everything else is always good for a laugh – tell Hoagie to 'pick up' Betsy Ross and he protests: 'Not my type.' It's a game Edward de Bono would delight in.

A game of this ilk depends on its characters to hold your attention. Virtually every character in *Day of the Tentacle* is perfectly drawn – even the tentacles have different personalities –

After a disaster with the Chron-O-John, Bernard emerges somewhat the worse for his trip, and distinctly unamused.

Laverne, pre-Tentacle costume. Almost as good as the bit later on where she's chatted up by the tentacle guard...

... 'Hot tentacle babe?' Who does he think he's talking to?

THREE CLOWNS

Our three heroes. Laverne walking, Hoagie emerging, and Bernard mastering technology.

Ben Franklin recharges Hoagie's super-battery. They didn't have electricity in those days.

Don't try using the 'pick up' command with 'Betsy Ross'. Hoagie'll just be facetious.

and you're bound to recognise someone you know in the three main characters. Everyone has their own rather unpleasant personal habits: leave Bernard alone for a while and he happily scratches his bum. Tell him to 'look at' the phone and his response is typically nerdy: 'Sleek design, sturdy construction, attractive housing... in all, a fine phone.' Hoagie burps regularly and, according to Bernard, can 'pass out standing up and not drop anything'. Laverne twiddles her hair, bites her teeth, examines the contents of her ears, and protests against using the scalpel – 'I can't, my therapist and I have an agreement.' The game even successfully pokes fun at such luminaries of American history as George Washington, John Hancock, Thomas Jefferson and Ben Franklin ('to be frank, which I am...'). Conversations, no matter who you hold them with, are always snigger-worthy.

It's in the delivery

Day of the Tentacle is also a study in one-liners. 'Bernard, float over here so I can punch you,' neatly defines Hoagie's personality, while Laverne pinpoints what really bugs her about tentacles: 'I still don't understand how they can eat through a sucker.'

This looks like a good place to start a panic. Reacting like that over a little skunk...

There's a nifty secret to playing back the video tape. You'll find out. Eventually. Heh heh.

Dwayne suffers 'a WAREHOUSE of anguish', and Hoagie meets a horse who tells him: 'I don't do magic. I'm just a horse.' Dr Fred has his own plans for the game: 'Step One: Find Plans. Step Two: Save World. Step Three: Get Out of My House.' Hoagie emits the groanworthy 'I'm no marble deliveryman, but rock is my life. Heh heh.' And how much does the tentacle guard hate humans? 'Like the wax that builds up behind your suction cups after a few days.' Say no more.

The animation and sound effects would do any cartoon proud. Hoagie's bumcrack rivals a whole building site's worth of builders as he squeezes into the grandfather clock, then pops improbably out of the chimney. The tentacles bounce-squelch-bounce along, Laverne's eyes bulge pulsatingly, and even the cat is grotesque – its neck stretches like a rubber band as it shambles about the place.

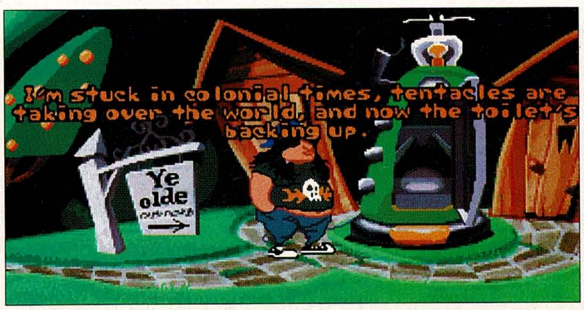
It's impossible to fault *Day of the Tentacle*. You'll love it. You'll hate it. You'll want to drop it out of the window and wring Bernard's neck. It's an adventure game that, one day, you might even play right through again. And that's saying something. **MF**

Having drunk from polluted waters, Purple Tentacle decides to take over the world.

Don't even ask what's going on here.

'It's a monster, dude.' Dr Edison is unimpressed.

A common chat-up line in the MACFORMAT office. It never works though.



Hoagie having a bad day. It's moments like these that make real life more palatable.

DAY OF THE TENTACLE

Price: £39.99. **Out:** now.
Requires: Quadra or better, 8Mb of RAM, System 7.1 or later, 256-colour, 13-inch monitor, double-speed CD-ROM drive. Hard disk required for save games only.
Contact: Virgin on 0171 368 2255.

GRAPHICS 95%
Manic graphics, classic cartoon characters and wacky animation.

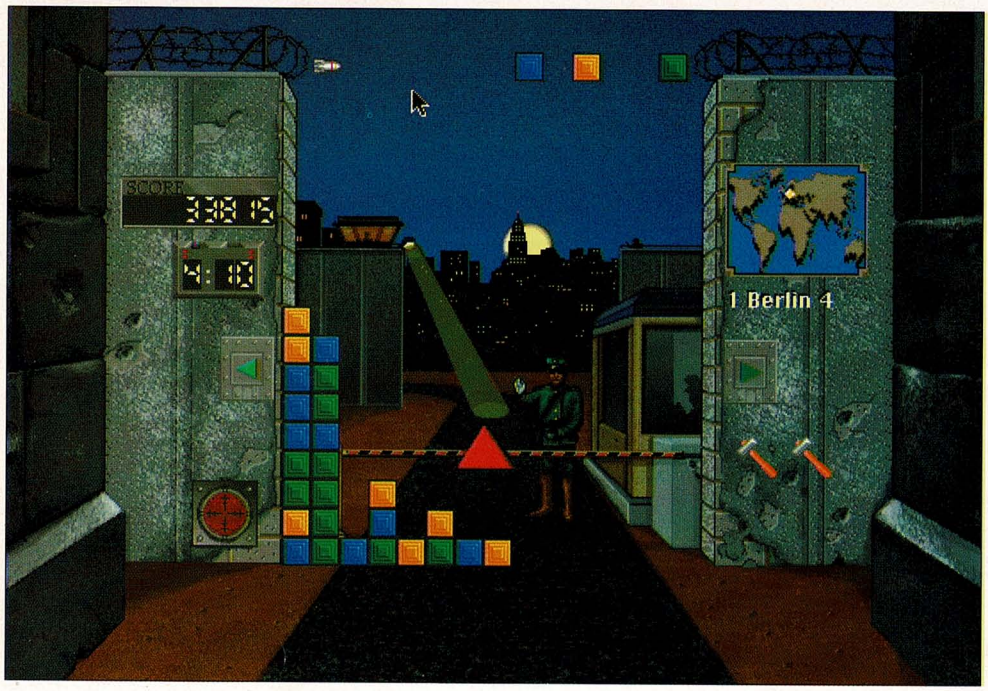
SOUND 93%
The voices and effects perfectly complement the graphics.

GAMEPLAY 95%
Frustrating, bizarre, annoying, hilarious, sometimes downright lateral.

MACFORMAT RATING 94%

Bricks, Blocks and Clocks

***Tetris, Breakthru* and *Clockwerx*. The perfect collection for puzzle addicts?**



There's something ironic about it. In the days of the Iron Curtain and the Berlin Wall, Russian computer scientist Alexei Pazhitnov gave the world *Tetris*, a wall-building game. Now that his country has immersed itself in the 'time is money' capitalism of the West, he's come up with a game based on revolving clock hands. Continuing the line of thought, the third of the trio is *Breakthru*, a wall-demolishing game.

Tetris is familiar to most. The implementation here is slight: hidden treasures and helpful bombs, pictures from the Moscow Circus and the addition of the word 'Super' to the title. *Breakthru* is like *Tetris* in reverse: click on adjacent bricks of the same colour and they disappear, while the rest of the wall settles down to occupy the space. It's addictive in the same way as *Tetris*, but, apart from bread-and-butter

Breakthru is *Tetris* in reverse. Rather than building a wall, you knock it down. Symbolic of capitalism?

COVER VERSIONS

Diamonds 3D isn't the only variation on *Breakout*. A crude $5 shareware version of *3D Breakout* called *Shatterball* appeared on MACFORMAT 19's Cover CD.

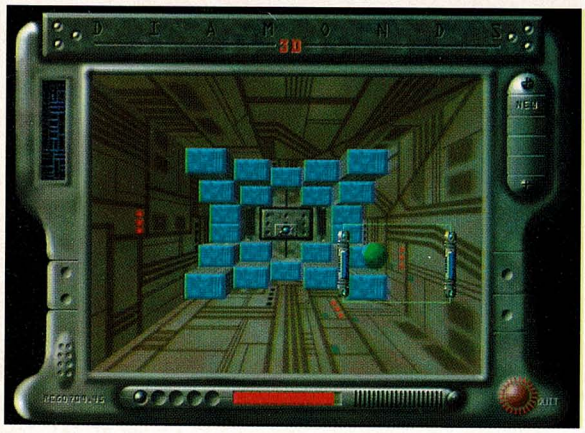
Diamonds 3D

Ever feel like banging your head against a brick wall? Check out this budget-price 3D breakout game instead.

Diamonds 3D is more of a brick-breaking than a ground-breaking game. It's a high-quality three-dimensional implementation of *Breakout*, one of the first, classic, arcade computer games – it's so old, there wasn't even a Conservative government when it first came out. The concept is simple: manoeuvre a bat so that a bouncing ball breaks down a wall, brick by brick.

Okay, so it's just a rehashed old classic, but at a bargain $15 – around a tenner – it's perfect if you're in search of mindless entertainment. There are seven varieties of brick, which do all sorts of things with the ball, and a few diamonds (the title had to come from somewhere). At least 45 levels keep you busy, progressing in difficulty and variety. That should be enough to keep you occupied far into the next government.

ROB AINSLEY



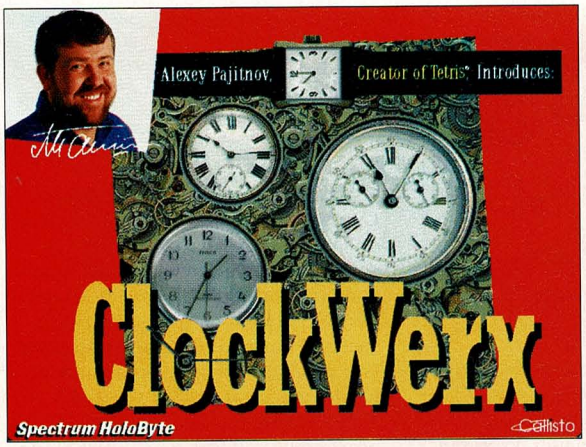
Variations from game to game are subtle – the pattern of the bricks changes but the fundamental objective remains the same: demolition.

Diamonds 3D offers a similar challenge to the classic game *Breakout*, but in three dimensions. The moveable square on the left bats the ball back into the court to break the bricks. It's mindless and curiously relaxing, much like the original.

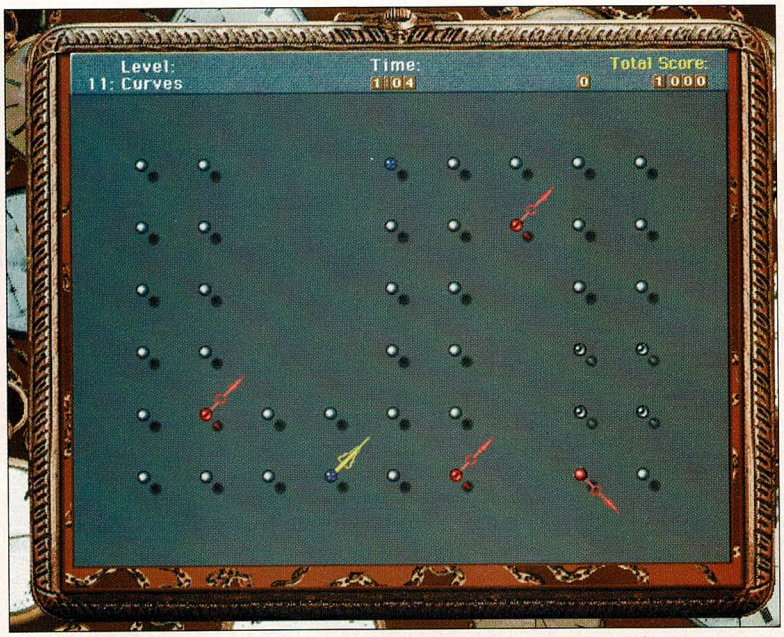
DIAMONDS 3D

Price: $14.99. **Out:** now.
Requires: 4Mb of RAM, System 7 or later, 13-inch monitor.
Contact: MacSoft in the USA on 001 800 229 2714.

MACFORMAT RATING 76%



That's what Mr Pazhitnov looks like. This man is to blame for huge quantities of lost work hours.



In *Clockwerx*, your revolving gold clock hand uses dots as stepping-stones past the deadly red clock hands.

graphic backgrounds and cheesy music, it also offers little you wouldn't find in a shareware version – it does the job, but it's nothing special.

The new *Tetris?*

Clockwerx, Pazhitnov's new game, appears exclusively in this collection, and is likely to be your main reason for buying this collection. You control a gold clock hand spinning round a dot. Using key presses, you have to jump from dot to dot, aiming to reach the target dot and picking up goodies on the way. To make each jump, you press the keys just as the tip of your clock hand passes a dot. You also have to avoid touching obstacles such as lethal, red clock hands. *Clockwerx* is not as addictive as *Tetris* and more dependent on timing skills and dexterity. Nevertheless, like the irresistible *Tetris*, it's simple yet challenging.

Just one grumble. The copy protection feature is clumsy: you have to consult the manual to answer a random trivia question before a game will load. It's an irritating and unnecessary device – you'd think Comrade Pazhitnov would have left behind interrogation techniques like that with the debris of the Berlin Wall. **Rob Ainsley**

Bricks, Blocks & Clocks

Price: £29.95. **Out:** now.
Requires: LCIII or better (not compatible with Mac II, Mac Plus, SE, Classic or PowerBook 100), 4Mb of RAM (5Mb for music), System 7 or later, 256 colours or 16 greyscale, CD-ROM drive.
Contact: MicroProse on 01454 329510.

MACFORMAT RATING 68%

TETRIS ALTERNATIVE

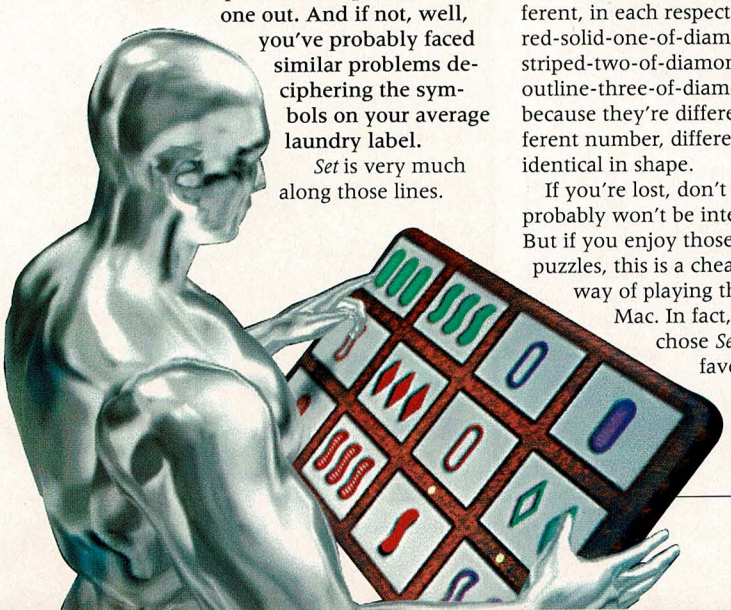
A great $10 shareware version of *Tetris* appeared on the MACFORMAT 20 Cover CD in January 1995.

Set

A mind-bending matching puzzle game that should delight MENSA types.

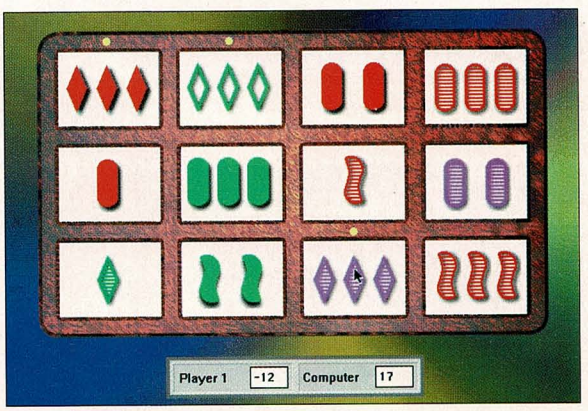
If you've ever done an IQ test, you'll be familiar with those match-the-symbol questions – you know, four rectangles with circles and shadings in various positions, and you have to spot the odd one out. And if not, well, you've probably faced similar problems deciphering the symbols on your average laundry label.

Set is very much along those lines.



You're presented with 12 cards, each of which can be one of three shapes, one of three colours, one of three shadings and one of three numbers. All you have to do is identify a set of three which are all identical, or all different, in each respect. For example, red-solid-one-of-diamonds, green-striped-two-of-diamonds, and purple-outline-three-of-diamonds, form a set, because they're different colours, different number, different shadings, but identical in shape.

If you're lost, don't worry – you probably won't be interested anyway. But if you enjoy those MENSA-type puzzles, this is a cheap and cheerful way of playing them on your Mac. In fact, in 1991 MENSA chose *Set* as one of their favourite games. A range of variations on the game enable you to play against the computer with up to ten players, and you can play it on-line via a modem. **Rob Ainsley**



The three cards marked by a yellow blob form a set, because they're all the same number (three) and the same shape (diamond), but different colours and different patterns. Player one is not doing well, as the score shows.

Set

Price: $12 plus $12 p&p. **Out:** now.
Requires: colour Mac, System 7 or later.
Contact: Set Enterprise in the USA on 001 602 837 3628.

MACFORMAT RATING 60%

SMARTYPANTS

MENSA is the society for people with high IQs. An IQ of 150 means you are a genius, while 100 means you have sufficient intelligence to understand that IQ scores are a load of utter rubbish.

In the First Degree

Court cases have always made for a gripping plot, whether it's television drama or a Hollywood film. So why not a game, with you as prosecuting counsel?

The hype, the hysterics, the hopelessly ill-fitting gloves. The trial of OJ Simpson did little for the reputation of American justice; less for its media. With the spotlight now on the judicial process, this release could hardly be more timely: a courtroom drama in which you play prosecutor. Black victim, white suspect. Bandwagon jumping has not been ruled out.

The scenario is simple. An art gallery owner has been murdered. The prime suspect is a well-known artist who was found injured nearby. It seems the deceased was having an affair with the defendant's girlfriend. Looks dodgy. An open and shut case, right? Wrong. As anyone watching the unfolding complications of the Simpson trial will testify, there is no such thing as an easy conviction in an American courtroom. Beyond reasonable doubt means just that.

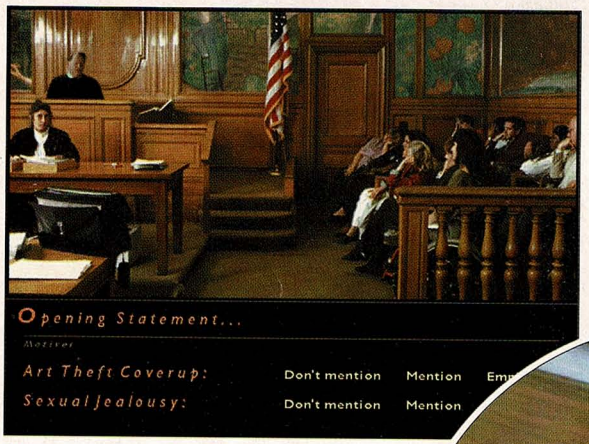
Coming on two CD-ROMs, *In the First Degree* is a cinematic journey into the heart of media-driven America. The whole affair is video-based and television is everywhere – every bar, every store, every health club sauna room. News bulletins flash up reports as your performance is torn apart by experts, reporters and the general public. It's a disconcerting feeling. You too are on trial, trial by television.

Before you hit the courtroom, however, you need to gather evidence and interview witnesses. The more you know about your case, the better your chances against the fearsome defence lawyer, Cynthia Charlton. Taking to the streets of San Francisco, you visit lofts, art studios and a motorcycle repair shop and question three key witnesses, who may or may not be telling the truth. Tact and force will elicit the responses you want to hear and it's a good idea to sift through the tapes and documents of the case first. It's difficult and occasionally laborious, but the use of video gives the action a standard Hollywood feel that leaves you feeling like a low-rent Tom Cruise.

The problem with *In the First Degree* is that the courtroom is everything. Outside its worthy chambers, the interactive chatting is uninvolving and a long way from the dynamic hustling of a movie. Clicking on a question can only ever be a partially satisfying experience because you know you aren't completely in control. Despite this, the courtroom scenes are as intimidating as you'd expect. The grumpy judge squats on every sign of your inexperience and his put-downs leave you wishing you were somewhere – anywhere – else.

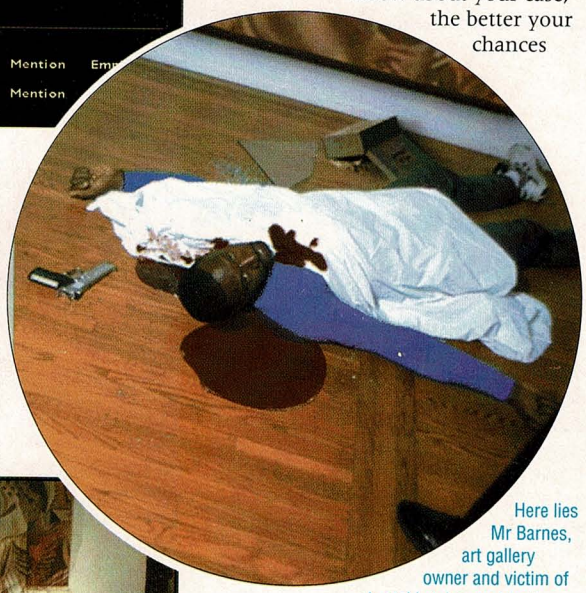
As a flashy trawl into the heart of American media madness, this is a truly original game. As a gameplaying adventure it's as flawed as the likely holes in your case, ambitious and yet strangely shallow. You're unlikely to play this game more than a couple of times. It really does get as repetitive as the constant plinkity-plonk of the irritating soundtrack.

By the year 2000, video encounters like these will be commonplace. While *In The First Degree* should be congratulated for being one of the first in this genre, its drawbacks are considerable. A diverting experience, but certainly not an essential one. **Gil Gillespie**

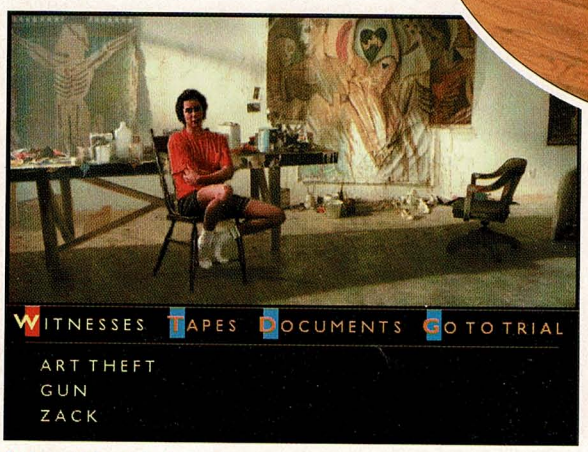


The courtroom scene is set. The atmosphere is tense. The judge is grumpy. The cameras are on.

The jury is caught in the throes of boredom within seconds of the trial beginning.



Here lies Mr Barnes, art gallery owner and victim of a brutal ketchup incident.



Art lover. This paint-splattered woman may or may not be telling the truth.

Television plays the central role in this case.

IN THE FIRST DEGREE

Price: £39.99 **Out:** now.
Requires: LCIII or better, 8Mb of RAM, System 7.1 or later, 13-inch colour monitor, double-speed CD-ROM drive.
Contact: SMI on 0181 563 2222.

GRAPHICS 85%
All video. Looks like a movie, although sometimes the lip-synching is out.

SOUND 70%
Irritating music, crackling mobile phones and blaring televisions. Not quite film quality, though.

GAMEPLAY 50%
Interesting at first, but much of the investigation is dull and pedestrian.

MACFORMAT RATING 68%

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Oregon Trail 2

A kids' game about cowboys that isn't a shoot-'em-up? What's happening? Discover the truth about the real Wild West, in a game that entertains and educates.

MAP READING

The Oregon Trail of the 1840s was a loosely-defined route, not a clear trail, following lines pioneered by trappers 20 years before. American homesteaders, encouraged by the government, set out there to grab territory which was also being claimed by Britain.

SHOOTOUT?

What shootout? In all the years Dodge City was the cowboy centre of the West, only 34 people were buried in the cemetery, and most of them had died from natural causes.

Most of the Wild West never happened. Those cowboy shootouts at high noon are fiction. As Bill Bryson writes in *Made in America*, there were only ever 10,000 cowboys at most – a quarter of them Mexican or black, by the way. Most of the people on the Wild West trail were regular folks, heading out to claim land in Oregon or California. But the shootout – and its ugly descendant the shoot-'em-up – makes for a better computer game than a historically accurate, but rather dull, travelogue.

Or at least, so you might think. But *Oregon Trail 2* is a superb and highly enjoyable adventure game which puts you in control of your own covered wagon, leaving for a better life in the West. It's essentially a history lesson, but one learned in the best way – through experiment and experience.

Once you've created your character, you shop around the town of Independence to gather supplies for your trip. There are lots of characters to chat with, who offer advice of varying credibility. The graphics and animation aren't state of the art, but still good, and the gameplay is quick – you don't have to put up with frustrating repeats of dialogue if you don't want them. A journal records your purchases and adventures, and there's a useful guidebook you can consult at any time, which gives you information about what to buy, when to leave, and how to deal with emergencies.

Then you join your wagon train and you're off. Members of your party might die, fall ill, or be bitten by snakes. You have bad weather to contend with and there are mishaps crossing rivers and tackling hills. And you meet lots of strangers whose intentions could be innocent trade, harmless chat, or something more sinister. Maps display your progress, and the incidents you encounter on the way are presented in clear dialogue boxes. A particularly nice touch is the video clips showing you the wildlife en route: plants, deer, buffalo, cute furry creatures and so on. The information bar at the bottom of the screen keeps track of how far you've travelled, the date, the weather, and your companions' morale – which can be kept up with campfire songs!

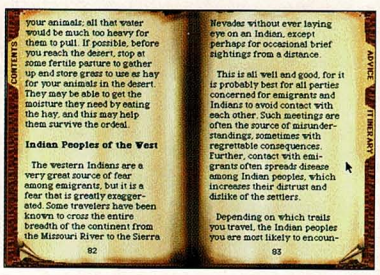
It's a shame *Oregon Trail* doesn't provide more historical information. After all, if you enjoy the game, you may well wish to discover more facts. Some kind of historical reference section would be a better way of learning than many tedious 'educational' CD-ROMs. You'll just have to visit your local library instead.

It may not appeal to the hardened game player, but kids will love *Oregon Trail 2* – it's fun, educational and offers genuine insight. This is what history should be like. You might even get into a shootout or two – but it will probably be to provide your dinner, rather than challenging Clint Eastwood to a draw.

ROB AINSLEY

MACFORMAT Classic

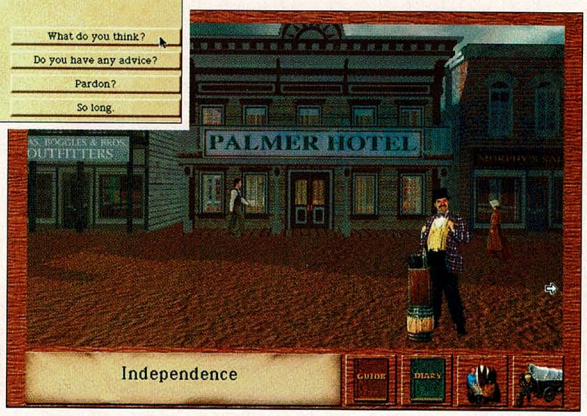
Part of surviving the Oregon Trail, as well as buying all the right supplies and surviving all your encounters, is keeping up everyone's morale.


CONTENTS
your animals; all that water would be much too heavy for them to pull. If possible, before you reach the desert, stop at some fertile pasture to gather up and store grass to use or hay for your animals in the desert. They may be able to get the moisture they need by eating the hay, and this may help them survive the ordeal.
Indian Peoples of the West
The western Indians are a very great source of fear among emigrants, but it is a fear that is greatly exaggerated. Some travelers have been known to cross the entire breadth of the continent from the Missouri River to the Sierra
82
Nevadas without ever laying eye on an Indian, except perhaps for occasional brief sightings from a distance.
This is all well and good, for it is probably best for all parties concerned for emigrants and Indians to avoid contact with each other. Such meetings are often the source of misunderstandings, sometimes with regrettable consequences. Further, contact with emigrants often spreads disease among Indian peoples, which increases their distrust and dislike of the settlers.
Depending on which trails you travel, the Indian peoples you are most likely to encoun-
83
ADVICE
ITINERARY

You can consult the guidebook at any time before making decisions. It offers you invaluable advice on what to buy, what to do and when to do it.

Mosquitoes are just one of the health hazards you might encounter en route. Snakebites, fire, nasty disease, even ambush, are all possible.

The Oregon Trail is about meeting and talking to people along the way. Most are helpful, but there are cheats and tricksters.



You start the game in the town of Independence, gathering supplies. Avoid the chap in the dodgy suit!

OREGON TRAIL 2

Price: £19.95. **Out:** now.
Requires: LCIII or better, 5Mb of RAM, System 7.1 or later, 13-inch colour monitor, 12Mb hard disk space, double-speed CD-ROM drive. Quadra or better and 8Mb of RAM recommended.
Contact: Iona Software in Ireland on 00 353 1 836 6328.

GRAPHICS 92%
Utilises an excellent mix of backdrops and animation.

SOUND 89%
The sound effects illustrate everything appropriately.

GAMEPLAY 90%
Fun, challenging, educational.

MACFORMAT RATING 90%

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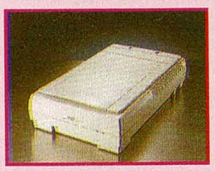

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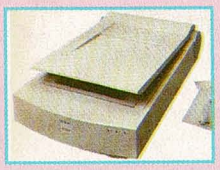

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You don't know Jack

With an abusive title, a frivolous approach and American humour, this is one quiz game that packs a punch. Book your therapy sessions now.

With a title like that, it doesn't take much to guess that this game's going to be on the light-hearted side. *You Don't Know Jack* is from the same guys that came up with the *After Dark* screen saver complete with flying toasters – these chaps think they're funny, and, providing you originate from Cambridge, you might be inclined to agree with them. Cambridge, Massachusetts, that is.

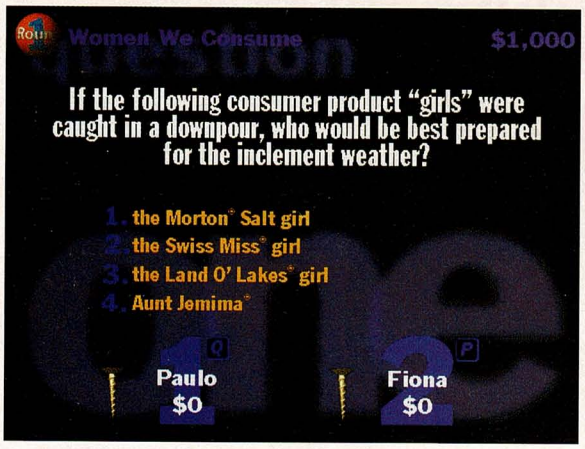
You know those quiz machines you get in pubs? The ones you can't resist, even though you know you'll end up wasting two quid and feeling stupid? Has it ever occurred to you that this could be a great Mac game? You could spend the rest of the afternoon at your Mac pretending to work, when really you're recovering from the beer and playing a quiz game. Excellent idea.

And here it is at last, a spoofed-up quiz game for the Mac. *You Don't Know Jack* puts up to three players to the test, and you don't have to feed any cash in, although, conversely, you don't get any cash out either – but have you ever won on a pub quiz machine? Visually, it's minimalist, and the atmosphere is set by a 'game-show-host', who rattles off the questions in a queasy American accent, and rapturous applause, which accompanies those rarely correct answers.

A question of substance

It's quick, it's fun, it's immediately appealing, as long as there's more than one of you playing, and it's appallingly American. Know anything, anything at all, about those obscure US sitcoms which you only get to see if you've got a mate with cable who doesn't mind you watching the telly at three in the morning? No, thought not. In which case there are questions here that you won't get right unless you guess. How about American politics? American foodstuffs? American sports? No, no, and again, no? Oh dear. We have found a stumbling block, and its name is American culture. There are questions in here that you will be able to answer, or at least have a decent go at, but, alas, these account for less than 80% and that just ain't good enough (to use an Americanism).

You Don't Know Jack hits the spot, almost. It has the right ingredients, they just got shipped to the US and came back with a complex. The super-smooth presentation, the quick-fire delivery of questions and the chance to occasionally 'screw' your opponent could have been a recipe for cult success. But, no, those dang Yankees have gone and spoiled it. **PAUL PETTENGALE**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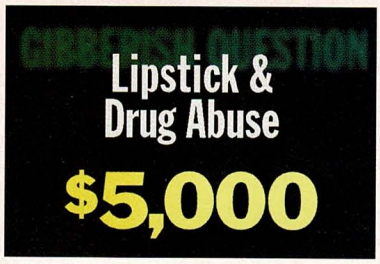
1. the Morton® Salt girl
2. the Swiss Miss® girl
3. the Land O' Lakes® girl
4. Aunt Jemima®
Paulo
$0
Fiona
$0

With the two player game you get the chance to pass the buck and force the other player to answer. Paulo's about to do the dirty on Fiona here. Tsk.



Dubious question categories ahoy! Here your knowledge of illegal substances is put to the test.

Hmm, not doing too well here. Something to do with all those American questions, perchance?

YOU DON'T KNOW JACK

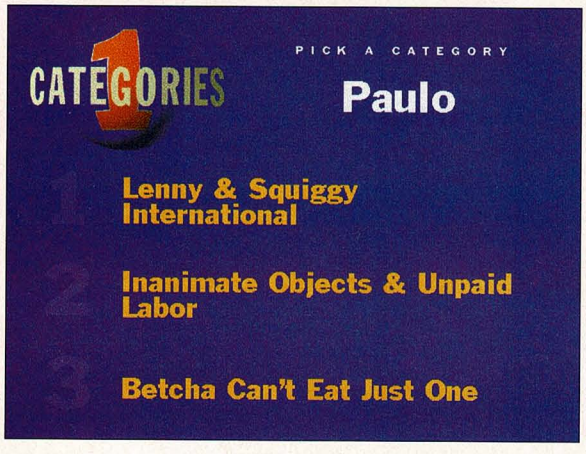
Price: £39.99. **Out:** now.
Requires: Quadra or better, 5Mb of free RAM, System 7.1 or later, 13-inch colour monitor, 15Mb of hard drive space, double-speed CD-ROM drive.
Contact: Softline on 0181 401 1234.

GRAPHICS 40%
Minimalist and functional.

SOUND 88%
Excellent – ambient effects combine with your host's nasal ramblings.

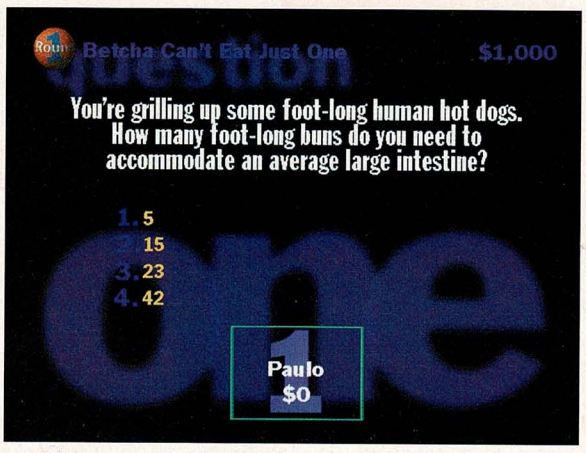
GAMEPLAY 45%
Shallow, but fun – providing you've lived in America for most of your life.

MACFORMAT RATING 50%



Right: choosing a category is almost as hard as answering the questions. Betcha Can't Eat Just One sounds like a safe(ish) bet this time.

Far right: how many hot-dogs, end to end, would it take to fill a large intestine? Doesn't bear thinking about, really.


Betcha Can't Eat Just One
$1,000
You're grilling up some foot-long human hot dogs. How many foot-long buns do you need to accommodate an average large intestine?
1. 5
2. 15
3. 23
4. 42
Paulo
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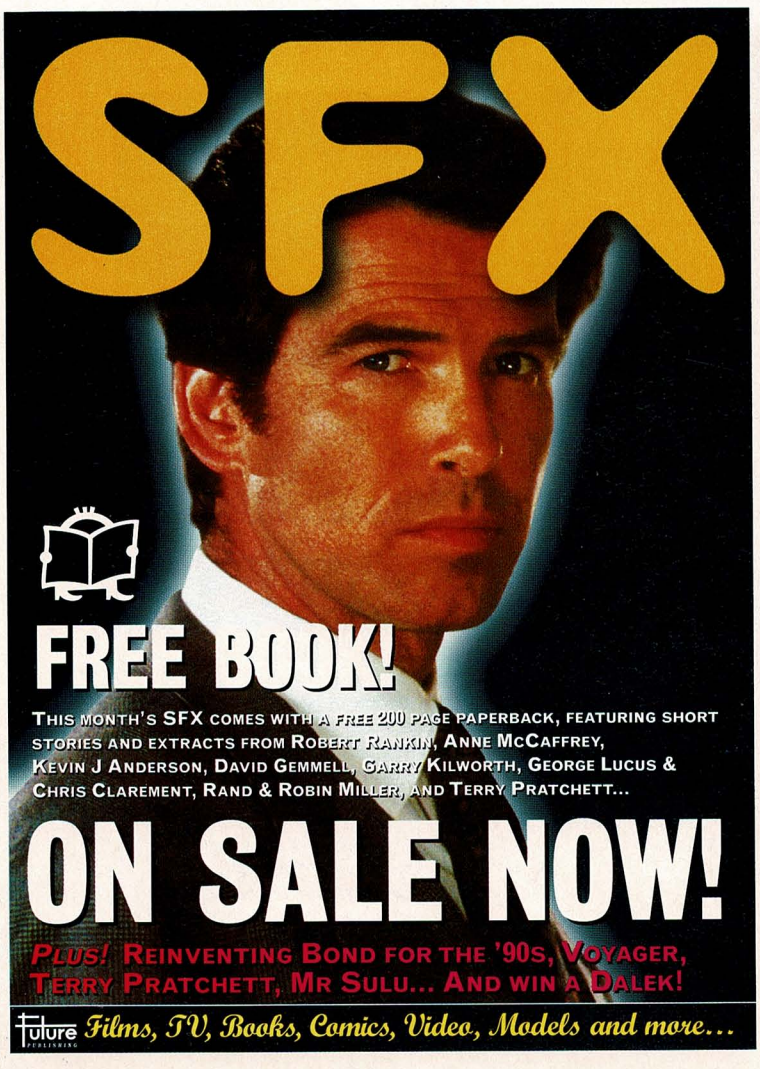
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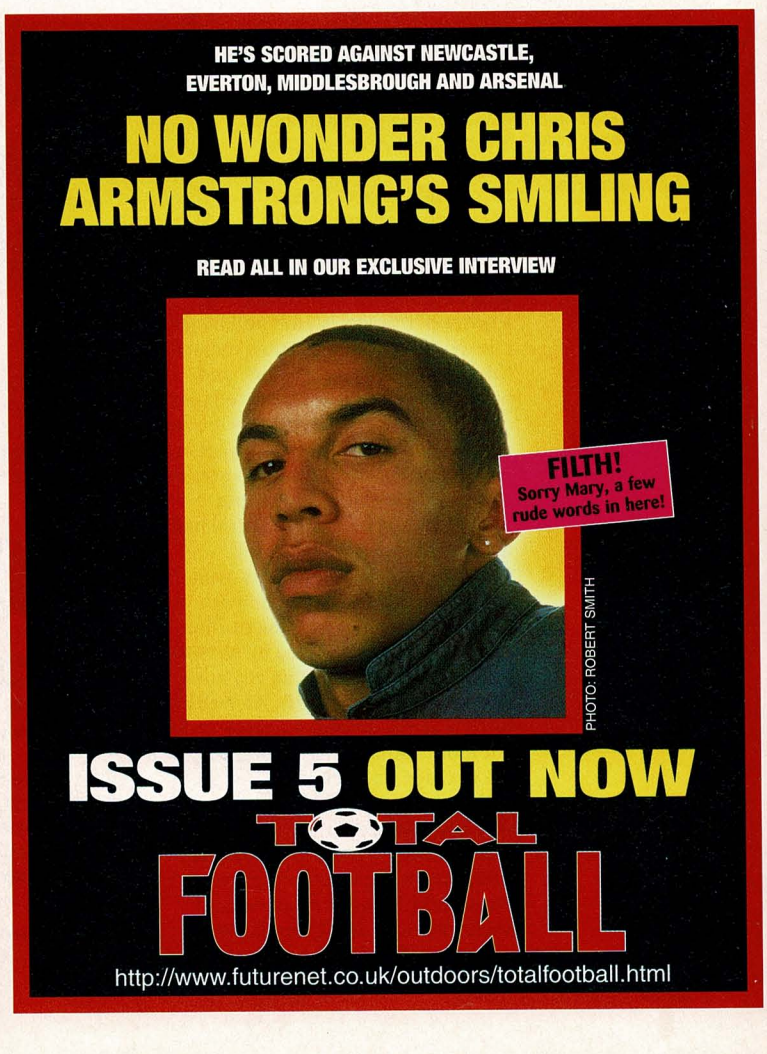
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Sorry Mary, a few rude words in here!
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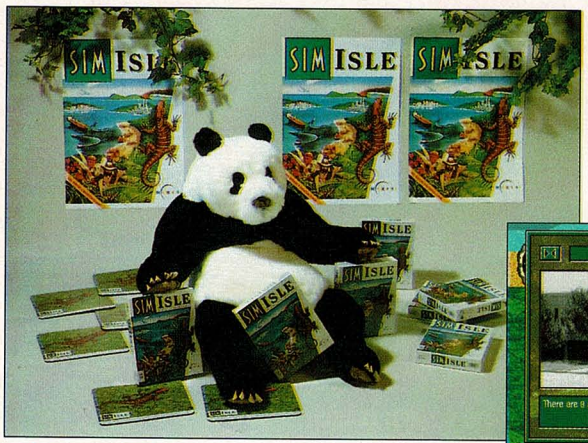
Win a copy of SimIsle and a giant panda

Win the latest in the 'Sim' series, *SimIsle*, and a giant stuffed WWF panda – there's two to be won, plus ten copies of the game for runners-up, courtesy of Maxis.

Fancy creating your own tropical rainforest paradise? Maxis are about to release the latest game in the award-winning 'Sim' series, *SimIsle*. It's sure to prove a worthy successor to the classic *SimCity, SimCity 2000, SimAnt, SimTower, SimEarth* and *SimTown*.



Yes, you can find life fulfilment with a copy of *SimIsle*, a giant stuffed panda and a *SimIsle* mouse mat.

As you'd expect from a Maxis simulation, *SimIsle* offers a complex challenge. You are manager of a rainforest ecosystem, controlling a series of tropical islands and all their natural resources. You must maintain the balance between ecology and economy. All sorts of interested parties are vying for your attention – miners, oil companies, tourists, ecologists and endangered species. It's up to you how you use their expertise without destroying the beautiful natural habitat in which you find yourself.

SimIsle incorporates Maxis' well-known simulation expertise with video and sound effects taken from real rainforests (provided by *Network Earth*, the award-winning environmental series from CNN). As well as being a game, it's also a chance to find out more about the ecological issues – the package offers over 500 pages of background information, with stunning photographs and drawings.

A game as ecologically sound as *SimIsle* neatly reflects the beliefs of the World Wide Fund for Nature, and Maxis are donating £1 to the WWF for every copy of *SimIsle* sold.

Maxis are renowned for their simulations and have won over 40 awards for their excellence and innovation in game design. They are one of the industry's fastest growing software publishers, famous not just for the *Sim* series but also for titles such as *Widget Workshop* – part of their ever-increasing range of home creativity titles.

You could be one of the first to own *SimIsle* by entering our massive compo, courtesy of Maxis. The two entries picked first from the ecologically-sound tropical hat will each win a giant WWF panda, a copy of *SimIsle* and a *SimIsle* mouse mat. The next ten will win a copy of the game and a mouse mat, and ten further runners-up will win a *SimIsle* mouse mat.

All you have to do is answer the three simple questions below and send us your entry on a postcard or the back of a sealed envelope. The closing date is Friday 26 January 1996.

Can you create the perfect tropical island paradise? *SimIsle* is another challenging game from Maxis, and we have 12 to be won!

The Rules

Employees of Maxis, Future Publishing Ltd or associated companies, and their families, are not eligible to enter. Multiple entries are not allowed, unless accompanied by a nice cuddly toy. The editor's decision is final, no correspondence will be entered into, and there is no cash alternative. Please state if you don't want your name added to a mailing list. **MF**

THE QUESTIONS

1. Maxis are famed for their range of *Sim* titles. These do *not* include:
(a) *SimTown*
(b) *SimCity*
(c) *SimLakesideRetreat*

2. *SimIsle* features video footage from which award-winning environmental documentary?
(a) *Life on Earth*
(b) *The Word*
(c) *Network Earth*

3. The aim in *SimIsle* is to:
(a) Create a flourishing yet ecologically balanced economy
(b) Sell as many panda skins as possible before bailing out
(c) Shoot down all the baddies before they have a chance to shoot you

Send your answers on a postcard or sealed envelope to: 'The Perfect Tropical SimCompo', MACFORMAT, 30 Monmouth Street, Bath BA1 2BW.

Free reader ads

'Lonely second-hand Mac seeks careful new owner for romance, happiness and perhaps a little innocent fun.'

HARDWARE FOR SALE

■ Performa Plus **14-inch monitor**, boxed – £150 or swap for CD300e Plus. Nick ☎ 0181 399 3959

■ **Performa** 450 8/120, CD300e+, 14-inch Performa Plus monitor, keyboard, manuals etc, vgc – £850 ono. David, Glos ☎ 01608 650106 (eve)

■ **PowerMac** 6100/60 8/250, internal CD-ROM, 14-inch Trinitron monitor, keyboard, mouse, as new, manuals – £1,450. Reigate ☎ 01737 246661

■ **StyleWriter II** printer, vgc – £100 ono. Chris ☎ 0181 883 9065

■ **Two Mac SEs** 1/40, mouse, keyboard, vgc – £120 ea. Vic/Ken ☎ 0181 937 6185 (day) or 01582 29788 (eve)

■ **IIcx 5/40,** monitor, keyboard, slightly damaged – £250; 88Mb SyQuest and disk – £150; StyleWriter II – £115; Mac & Fax 14,400 – £75. Richard ☎ 01703 431159 (eve)

■ **Power CD,** remote control, great for laptops, portable, vgc – £100 ono; lots of CDs. ☎ 0121 526 3420

■ **PowerPrint,** drivers, cable, guarantee, use any PC printer on your Mac – £85. ☎ 0121 526 3420

■ **LCIII 4/80,** keyboard, Performa Plus 14-inch monitor, mouse, manuals, *Claris*, vgc, 16 mths old, home use – £700 ono. ☎ 01245 474115

■ **Quadra 840AV,** 24/500, one yr old, 15-inch Apple colour monitor, ext k/board II, mouse, microphone, extras – £2,100. Cambridge ☎ 01223 515613

■ **Mac II,** colour monitor, keyboard, mouse, 40Mb external hard drive, Caere Typist scanner, all software & cables – £700. ☎ 01908 321035

■ **PowerMac 7100/66** 16/350, quad-speed CD, 14-inch Trinitron monitor – £1,500. Simon, Hampshire ☎ 01256 848485 (day), 01252 624250 (eve)

■ **Personal LaserWriter,** PostScript, vgc, light home use, 8,000 copies, almost new toner cartridge, cables, manual – £425. ☎ 01670 823232

■ **PowerMac 7100/66** 24/350, 14-inch monitor, quad-speed CD drive, StyleWriter II, boxed, guaranteed, software, extras – £3,100 ono. Joshua ☎ 01328 864981 or 01328 851938

■ **Canon CLC10** colour copier/printer c/w IPU & slide projector, warranty – £2,600 ono. ☎ 01252 372294

■ **LCIII 6/80,** accelerator, extra VRAM, new (boxed) StyleWriter, manuals, System software – £675. Simon ☎ 01754 874230

■ **Radius Precision** colour pivot 15-inch monitor, portrait & landscape, as new, unused, with software – £275. Surrey ☎ 01276 62780

■ **LC 4/40,** manuals, System 7.1, colour monitor, keyboard, mouse, StyleWriter printer, software & magazines – £500. ☎ 01743 232242

■ **Mac II,** upgraded to IIfx, 8Mb of RAM, 40Mb hard disk, 14-inch monitor, keyboard, mouse, boxed, software – £945 ono. Jos ☎ 01328 864981

■ **LCIII 8/80,** 14-inch monitor, keyboard, mouse, FPU, *ClarisWorks*, all boxed, one yr warranty – £850 ono. Adrian ☎ 01328 851857

■ **Colour StyleWriter Pro** – £250; 300dpi b/w A4 scanner and software – £450 ono. John ☎ 01328 864981

■ **Performa 475** 4/250, manuals, *ClarisWorks 3* & others, five mths old – £500 or swap for Centris or Quadra 610. Gregory, US ☎ 001 301 873 0994

■ **Colour Classic** 8/80, exc cond, light use – £600. ☎ 01736 796082

■ **Performa 450** 8/120, Apple CD300e – £700. Newport, Gwent ☎ 01633 277554

■ **PowerPC 8100/80** 16/1Gb/AV, keyboard, mouse, good cond, manuals, one yr old, 2Mb VRAM – £1,800. ☎ 0181 954 6768 (after 7pm)

■ **Mac SE** 4/40, keyboard, mouse, vgc – £175. Durham ☎ 0191 384 6737

■ **LCII,** k/board, 13-inch colour monitor, mouse, 'student aid' software, manuals – £700. Ian ☎ 01299 403922

■ **Performa Plus** 630 8/250/CD, 15-inch monitor, loads of software, two mths old, boxed, hardly used, superb cond – £1,050. Rhys ☎ 01225 331272

■ **Colour Classic** 4/40, System 7.1, complete, boxed, *Word, Illustrator, Photoshop, PageMaker, QuarkXPress* – £750; HP DeskWriter 550c colour printer – £150. Essex ☎ 01277 657308

■ **44Mb SyQuest** drive, four cartridges, five mths old, good cond – £200. ☎ 0171 402 0336

■ **14-inch Apple** colour monitor – £150; StyleWriter II – £100; ext keyboard – £30; all one yr old, exc cond. Paul ☎ 0181 461 4299

■ **PowerBook 280c** EM Duo 12/500, carry case, mains adapter, System 7.5, manuals, *Mac for Dummies & Internet*, light home use only – £1,600 ono. Paul, Kent ☎ 01622 751109

■ **Classic 4/40,** System 7, keyboard, mouse, manuals, home use only – £200; GV Bronze fax-modem – £40. Nigel ☎ 0181 942 0771

■ **Agfa Arcus II,** colour scanner, transparency hood, as new, original boxes, manual, software, warranty – £1,600 ono. Ronny ☎ 0131 556 5112

■ **Mac IIvi** 5/80, Apple 14-inch colour monitor, internal CD300, ext keyboard, mouse, manuals, disks etc – £425 ono. ☎ 0181 569 6107 (eve)

■ **Apple LocalTalk** card for networking ImageWriter II or LQ printers – £40. Diane ☎ 0181 514 5150

■ **ImageWriter II,** cables, manual, vgc – £130. Diane ☎ 0181 514 5150

■ **Mac Plus,** 20Mb external drive, WP, drawing & other software, exc cond – £190. Diane ☎ 0181 514 5150

■ **Radius** 12-inch TPD greyscale, GS/C 8-bit card – £275; SIMMs, 30-pin, 1Mb, 2x70ns, 2x80ns – £15 ea or £50 the four; Apple microphone – £10. ☎ 0181 339 0850

■ **Epson Stylus** printer, latest drivers, five cartridges, as new – £399; one 4Mb 72-pin SIMM – £50. Katie, Berks ☎ 01344 291465

■ **Performa 450** 4/120, 768K VRAM, mouse, monitor, keyboard, CD-ROM, Apple speakers, 50Mb software – £1,100. Les, Glos ☎ 01452 859566

■ **LaserWriter Plus,** fuser unit faulty, plus leads – £30. ☎ 01902 721013

■ **Performa 5200,** four mths old, still boxed, bought for £1,550, sell £1,000; unused US Robotics Mac & Fax

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■ **LCII 5/160,** 14-inch colour monitor, k/board, manuals etc, System 7.1, vgc – £550. Staffs ☎ 01283 512154

■ **Classic II** 4/40, StyleWriter, SyQuest 44Mb drive, one cartridge, *ClarisWorks 1, After Dark 3, KeyFonts,* 50 HD disks – £600. Nick ☎ 01271 43376

■ **LaserWriter 300,** three mths old, boxed, as new – £400; 14-inch Audiovision monitor with adaptor kit, unused – £350. ☎ 0191 261 2683 (day)

■ **PowerMac 256K** cache card, genuine Apple port, boxed, as new – £90 inc P&P. ☎ 0191 261 2683 (day)

■ **ImageWriter II,** network card, cables, manual, box, stand, spare ribbons & continuous paper, used daily, as new – £100. ☎ 01684 850809

■ **Duo Dock** (1Mb VRAM) – £250; broken Duo 210 – £100; 4Mb Duo RAM – £75; 230Mb PowerBook disk – £100; keyboard, CD-ROM, SCSI lead – offers. ☎ 01524 62427 or e-mail **srm@comp.lancs.ac.uk**

■ **Texas Instruments Pro** 600 PS23 8ppm with memory upgrade, one mth old – £950 ono. John ☎ 01903 732590

■ **StyleWriter 1200,** nearly new – £175 ono. John ☎ 01903 732590

■ **QMS Colour** 100/10, PostScript colour laser – £800; IIci, 4/230, colour ImageWriter – £400; Radius Rocket 25I, SCSI-2 Booster – £550. B'ham ☎ 0121 327 3362

■ **LCII 4/80,** 14-inch Apple Trinitron monitor, keyboard, mouse, System 7.1, light use, all manuals, cables, disks – £450 ono. ☎ 01225 862506

■ **PowerPC 7100/66** 16/350, 14-inch monitor, keyboard, mouse – £1,250; Classic 4/40, carry bag, keyboard, mouse – £400; StyleWriter II – £110; Teleport Gold II – £110. e-mail **hychen@liverpool.ac.uk**

■ **LC630 8/350 CD,** 14-inch Apple AV monitor, keyboard, mouse, System 7.1 (CD), System 7.5 (disks), *ClarisWorks 2.1* – £1,200. ☎ 0121 443 5023 (eve)

■ **LC 4/40,** 12-inch monitor, light use, System 7, *GreatWorks, Flight Simulator, WordPerfect* etc, original disks, boxes, manuals etc – £500. ☎ 01323 848894

■ **LCII 8/80,** 14-inch monitor, CD300, HP 550, colour printer, software, cables, boxes, manuals, home use, good cond, two yrs old – £1,400 ono. John ☎ 0116 279 3164

■ **HP200LX** palmtop organiser, 2Mb, new, unwanted prize – £220. ☎ 01473 712503 (after 7pm)

■ **14-inch Performa** colour monitor – £75; ImageWriter II – £100; music s/ware sequencer *Performer 5, Alchemy,* more. Wanted: music software *Band-in-a-Box.* ☎ 01938 820578 (eve)

■ **Texas Instruments,** MicroLaser Pro 600 printer, 600dpi, 8ppm, light home use, still boxed – £700. Sanjay ☎ 0171 262 6311 (eve)

■ **LCII 6/500,** Impact accelerator, CD, 13-inch monitor, 32MHz FPU, QueStick, speakers, manuals, 18 mths old – £700 ono. Simon ☎ 01273 777091

■ **Laptop PowerBook** 520 8/250, home use, eight mths warranty, extras, manuals, boxed, as new – £950. Luke ☎ 0973 241415 (mobile)

■ **Colour Classic,** 6Mb of RAM, 80Mb hard drive, manuals, home use – £500. ☎ 01925 225342 (after 6pm)

■ **4Mb 72-pin SIMM** – £50. ☎ 0181 455 6036

■ **IIcx 8/40,** 13-inch Apple high res RGB monitor, HP DeskWriter, keyboard, mouse, extras – £600 ono.

■ **LCIII 8/340,** System 7.1, FPU, 16-bit colour, 14-inch monitor, double-speed CD-ROM, manuals, extras, boxed, – £695. ☎ 01708 374098

■ **Apple 14-inch** colour monitor, vgc, boxed, as new, RRP £250 – sell £150 ono. Matthew ☎ 0171 287 0045

■ **LaserWriter IInt,** less than 6,000 copies, – £550 ono. ☎ 01737 370099

■ **Mac IIcx** 4/80, 14-inch high res colour monitor, keyboard, mouse, original software, *Word, Excel, MacDraw* – £250 ono. ☎ 01737 370099

■ **Mac IIcx,** 8.24 video card, colour monitor, flatbed scanner, colour printer, CD-ROM drive, *Excel, Word, QuarkXPress, Photoshop,* CDs etc – £1,500, can split. Kent ☎ 01322 274524

■ **Four SIMMs** from Mac II, 0.25 RAM each – £35. ☎ 0171 378 0211 (answer machine)

■ **LC,** 32MHz 68030 accelerator, FPU, 14-inch Trinitron screen, 500Mb hard drive, 10Mb of RAM, CD, software – £900. Mike, York ☎ 01347 810685

■ **PowerBook** 145B, vgc, case, *ClarisWorks, Organizer,* 18 mths old – £650. Ian, Beaconsfield ☎ 01494 674349

■ **65Mb** hard drive, stacked to 130Mb (external), boxed Rodime (Frog) – £60 or swap for SyQuest disks or software. David ☎ 01438 811227

■ **LCII 6/40** 14-inch Trinitron monitor, Apple keyboard, mouse, System 7.1, disks, manuals, *ClarisWorks,* vgc – £600. Shrewsbury ☎ 01743 242039

■ **External hard drive** 540Mb, Quantum, less than a year old, guarantee, boxed – £180 ono. ☎ 00 49 524 137622 (after 5pm wkdays)

■ **ImageWriter II,** home use. Chris, Warwickshire ☎ 01926 495976 (eve)

■ **Mac IIci** 8/350 hard drive, five mths old, 14-inch colour monitor – £625. Paul ☎ 0181 863 0095 (eve)

■ **HP DeskWriter** b/w printer, as new, boxed, manuals, drivers – £100. Cheshire ☎ 01606 352124

■ **Newton MessagePad,** 2Mb card, battery pack, recharger, Apple Connection Kit, leather case, modem, great software, all boxed, brand new, manuals – £220. Gio ☎ 0181 201 8428

■ **LC475 8/80,** 33MHz, Performa Plus monitor, external 160Mb hard drive, external CD300, keyboard, mouse – £900. B'ham ☎ 0121 454 1867 (eve)

■ **PowerMac** 6100/60CD 8/250, 14-inch colour monitor, k/board, mouse, Colour StylerWriter Pro, over ten CD-ROMs – £1,250. Yao, Durham ☎ 0191 374 2559 (day) 0191 384 3421 (eve)

■ **PowerMac** 7100/66/40/500/CDAV, nearly new, boxed, mint cond – £1,500. ☎ 0151 648 1759

■ **Mac Plus** 1/20, mouse, keyboard, System 6, manuals, software, vgc – £250 ono. David ☎ 01932 562936

■ **Mac Plus,** 2Mb of RAM, 20Mb hard drive, keyboard, mouse, manuals – £300 ono. Darren ☎ 01243 573665

■ **Two 8Mb SIMMs,** £320 for the pair (72-pin, 70ns for PowerMac). ☎ 0860 106800 or 01704 507160

■ **Quadra 840AV** 16/500 CPU – £1,800; Performa 600 8/80 CPU – £600; can split. Paul ☎ 01684 850809

■ **LCII 4/80,** colour monitor, keyboard, mouse, home use only – £450 ono. Oxon ☎ 01235 769562 (day)

■ **Two 72-pin** 8Mb SIMMs – £170 each; two 72-pin 16Mb SIMMs – £285 each (suit newer 040/PowerMacs). Ben ☎ 01274 403858 (pm)

■ **PowerMac 7100,** 260Mb hard drive, 8Mb of RAM, CD, keyboard, mouse, System 7.5, 12 mths old – £1,100 ono. ☎ 01480 830395 (eve)

■ **Performa 200** 4/40, System 7.1, *ClarisWorks 3.0,* manuals etc, vgc – £270 ono. ☎ 0181 464 6317 (eve)

■ **PowerMac 7100/66** 8/350, 14-inch colour monitor, keyboard, mouse, CD300e, HP550c, GV Silver fax-modem, software, vgc – £1,500. Warren ☎ 0181 298 0541 (eve/wkend)

■ **Apple One** mono scanner – all software, one yr old. Lewis ☎ 01564 775314 or 0121 603 1001 (day)

■ **USR 14.4K** modem, software, as new – offers; *Photoshop LE 2.5,* boxed – offers. ☎ 01534 622952 (any time)

■ **Performa 450,** 4Mb of RAM, 120Mb hard disk – £500; Performa 14-inch monitor – £200; extras, games. Nick ☎ 0181 399 3959

■ **PowerMac 7100/66,** 8Mb of RAM, 350Mb hard disk, NEC external CD, keyboard, mouse, six mths old – £1,500 or offers. ☎ 0121 544 4060

■ **Global Village** Mercury Powerport fax-modem, 19,200bps data, 14,400bps fax, new, boxed, manuals, software, suits 100 Series PowerBook – best offer secures. ☎ 01226 205220

■ **DeskWriter 540,** inc Colour Kit, two mths old – £250 ono or swap for DeskJet 540. Nick ☎ 01223 277518

■ **Classic II** 6/80, carry case, System 7.1, exc cond – £800 ono. Nick, Cambridge ☎ 01223 277518

■ **SyQuest** (Micronet) 44Mb removable drive, vgc, six disks, each used once – £225. ☎ 01392 433533

■ **Mac SE** 4/40, 25MHz accelerated, carry case, 19-inch Radius b/w screen – £300 ono. ☎ 01225 448037

■ **Apple CD300** external & caddy, needs SCSI cable – £90 ono. Bath ☎ 01225 859094

■ **IW2 dot matrix** colour printer – £50; Scuzzygraph hardware & software drives, colour monitor for mono Mac – £60. Malcolm ☎ 01403 752559

■ **Classic II 4/40,** carry case, software, System 7.1, home use only – £350 ono. Grant, Edinburgh ☎ 0131 332 3607 (after 6pm)

■ **Quadra/Centris** 660AV/CD 8/500, System 7.5.2, music *(Cubase + Deck* etc), WP/DTP *(Quark, Photoshop)* etc, vgc – £750; with 14-inch colour monitor – £999. Steve ☎ 0171 813 0401

■ **Canon CLC10** colour copier/scanner/printer, IPU unit, vgc, needs cartridges – £2,500 ono. Hants ☎ 01590 612443 (day), 01590 612531 (eve)

■ **Colour Classic** 4/40, System 7.1, vgc, *ClarisWorks 2,* keyboard, mouse, manuals, Apple carry case – £500 ono. ☎ 01573 410256

■ **LCII 4/40,** 14-inch colour Trinitron monitor, vgc, boxed, manuals, 30 copies of MACFORMAT, games etc, home use – £600. Nick ☎ 01522 792671

■ **PowerMac** 6100/66 8/350, CD-300e, ext keyboard, 14-inch Trinitron monitor, accessories, warranty, as new – £1,900. ☎ 01209 821943

■ **PowerBook** 165 8/80 (stacked to 150Mb), System 7.5, manuals, adaptor, two batteries, carry case, *Aldus Persuasion 2,* mint cond – £750 ono. Steve, Taunton ☎ 01823 673047

■ **SIMMs** for LC, two 1Mb 30-pin SIMMs – £25 the pair. Steve, Taunton ☎ 01823 673047

■ **Radius Direct** Colour GX, 24-bit colour card – £350 ono. Rob ☎ 01543 454041 (day) 01922 39223 (eve)

■ **SE30 4/40** – £250; IIci 8/230 (computer & mouse only) – £400; both exc cond. Alán ☎ 0181 505 2521 (day), 0181 506 1067 (eve)

■ **LCII 8/80,** 14-inch colour monitor, CD300 double-speed, mouse, keyboard, SyQuest 44Mb drive, four cartridges – £850. Fitz ☎ 01438 820887

■ **PowerBook 160** 4/80, System 7.1, Internal Global Village Bronze modem, vgc – £875. Benjamin ☎ 01453 546752 or e-mail

USER GROUPS

Need hands-on help with a Mac problem? Want to swap shareware or freeware, or just meet other Mac enthusiasts? Try a user group near you.

■ MACBEL User Group VZW – Belgium's only non-profit Mac User Group. Bimonthly magazines, Internet discounts, local BBS support (Telefinders 32-3-4543069) and meetings. Contact Bart, Belgium ☎ 00 32 3 6404031 or e-mail **info@macbel.be** (MF34)

■ Mac Jungle BBS – Telefinder host – 28.8K V.34 modems – over 1Gb of Mac shareware on-line! Supports TLAN conferences daily. ☎ 01235 520507 (MF34)

■ Midapple, the Mac users' group in the West Midlands. Monthly meetings, newsletter. Send SAE for details to Midapple, 24 High Street, Wall Heath, Kingswinford, W Midlands, DY6 0HB. (MF36)

■ Brighton Hanover Computer Club for Mac, IBM and Amiga users. Meet fourth Tuesday every month at the Hanover Centre, 33 Southover Street, 8pm. Contact Colin ☎ 01273 602834. (MF36)

■ The Mac Factory BBS. Specialises in Mac shareware. ☎ 01977 708911 (24hrs). SysOp Mark Evans. (MF37)

■ Massacre Bulletin Board now on-line. Modem speeds up to 14,400 24 hrs. ☎ 0131 447 9199 (MF37)

■ Red Apple Software, the Distribution Group! Non-profit making shareware authors, an established network for old & new programmers. Write to: RAS, Lane End, Oak Tree Lane, Tavistock, Devon PL19 9DA or log on to AppleEye BBS on 01234 822180. Red Apple/PentriSoft in the Computing conferences folder. (MF37)

■ The SE Essex Mac User Group meets in Southend, second Monday of the month at 8pm. Mike Foy ☎ 01702 468062 or e-mail **mac@mikefoy.demon.co.uk** (MF38)

■ A new *First Class* BBS, Xnet UK ☎ 01992 550733. A local number to all London numbers, devoted to all subjects for problems. (MF38)

■ Media Club – the best Portuguese Mac user group. Free on-line help via Telnet International. Please send SAE to Media Apartado 15006-1073, Lisboa, Codex, Portugal. (MF39)

■ Australia Queensland Toowoomra Mac UG. 202 Darling Street, Drayton, Toowoomra, Queensland, Australia 4350 ☎ 61 076 333383 or fax 61 076 333383

Groups are listed here for six issues, then deleted to help weed out defunct groups. The code at the end of each entry is the last issue in which it will appear. If you want your entry renewed, send in the coupon on page 129. If your group isn't listed here, then send us your details!

This list is a free service for amateur, non-profit-making Mac user groups. MACFORMAT does not endorse or recommend any group and cannot be held responsible for any problems you might suffer as a result of contacting groups advertised here.

mbenjamin@gri.apc.org or **benjamin@prema.demon.co.uk**

■ **Duo Mini Dock,** one yr old, vgc – £170 ono. Ken ☎ 0171 624 2551

■ **Performa 400** 4/40, 14-inch monitor, System 7.1, k/board, mouse, software, *Quark, Word, ClarisWorks,* boxed – £750. ☎ 01342 314179 (anytime)

■ **4Mb 72-pin SIMM,** new, unused due to Apple's lack of foresight with my Mac – £100 no offers. ☎ 0117 963 9940 (any time – leave message)

■ **Performa 400** 4/40, *ClarisWorks,* warranty, HP DeskWriter 510, vgc, manuals – £500. ☎ 01273 494023

■ **LCIII 8/500,** FPU, 14-inch Trinitron monitor, StyleWriter printer, CD300 CD-ROM, upgraded VRAM, home use – £800. Andover ☎ 01264 335239

■ **Performa 400** 8/40, 512K VRAM, 14-inch colour monitor, keyboard, mouse, Apple CD 300e Plus, StyleWriter II, System 7.5, *ClarisWorks 3,* manuals, disks etc, dust covers, home use – £750. David ☎ 01442 890469

■ **Performa 400,** upgraded to 12/80, Apple Power CD connections, manuals, boxed, can deliver – £750 ono. Stephen ☎ 01360 620394 (after 7pm)

■ **Iomega Zip Drive,** one 100Mb disk, all you need to get started, boxed – £150. Stuart ☎ 01664 67805

■ **LCII 8/80,** 14-inch colour monitor, k/board, CD300 14.4K modem, *ClarisWorks 3, Claris Organizer* & more, boxed – £750. Hereford ☎ 01432 357023

■ **TV/Video in** card for Performa/LC630, *Avid Videoshop 2* – £150; *Organizer* – £20, *Expert Draw* – £15; *Monkey Island* – £8. Kevin ☎ 01405 815415

■ **Mac IIsi** 68030 CPU, colour monitor, 5Mb of RAM, 80Mb hard disk, System 7.5, keyboard, mouse, *Word 5, M For Base, SimCity, Theme Park* and more – £500 ono. ☎ 01548 844142

■ **IIsi 5/40,** 13-inch colour monitor, keyboard, mouse, original manuals & disks – £450. ☎ 01932 561722 (eve)

■ **Microtek ScanMaker** 600gs, boxed, v light use, SCSI cable, software, manuals – £250; Radius 21-inch GS monitor – £100. Richard, Middx ☎ 0181 977 0888 (day), 0181 949 1500 (eve)

■ **Radius 24XK,** brand new, latest software upgrade, works with PowerMac – £400 ono. ☎ 01234 853434

■ **Mac Plus** 2.5/20, keyboard, mouse – £200. ☎ 01932 561722 (eve)

■ **LCII 4/80,** System 7, 14-inch colour monitor, b/w HP DeskWriter, manuals, spare print cartridge, vgc – £800 ono. Aylesbury ☎ 01296 641040

■ **PowerBook Duo** 230 4/80, hardly used, boxed, manuals, System 7.5.1 – £690 ono. ☎ 0181 743 9485

SOFTWARE FOR SALE

■ **Mac games,** boxed, original disks & manuals; books on Mac; *The Macintosh Bible* – offers. Diane ☎ 0181 514 5150

■ ***Publish-It Easy 3*** – £65; *Paint It!* – £25; *ProFonts,* 1,550 Fonts – £35; Apple Fonts Pack – £30, new, unused. ☎ 01384 481728 (answerphone)

■ ***From Alice to Ocean,*** CD – £15; *Quick-Toons,* CD – £15; MPEG videos on CD – £15. ☎ 01384 481728

■ ***Theme Park,*** *Syndicate, Populous, SimCity 2000,* vgc – £25 each, £80 the lot. Cameron ☎ 01506 842415 (eve)

■ ***RAM Doubler*** – £35; *Theme Park & Flashback* – £20; *Story Book Weaver* – £15. ☎ 01484 683059

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■ ***Strata Studio Pro 1*** – £400; *HyperCard 2.2* – £50; *HyperCard in a Hurry* book – £10; *Norton Utilities 3.1* – £40; *RAM Doubler* – £30; *Adobe Audition* CD kit *(Premiere 2 & Photoshop LE)* – £70; all boxed. ☎ 01382 226167 (eve)

■ ***PageMaker 4.2*** – £100; *MacWrite 2* – £20; disks, manuals. ☎ 01734 886215

■ ***Symantec Think C 5,*** discs & manuals, *Macintosh C Programming Primer* vols 1 & 2, two more C books – £40. Glasgow area ☎ 01505 612799

■ ***French Book in your Mac,*** public domain free disc demo version, *Acrobat* files free demo disc. Write to Tableau Olivier, BP34, 95560, Montsoult, France

■ ***Falcon MC*** – £20; *A10 Attack!* – £25; *Flying Nightmares* – £15; *Monkey Island 2* – £20; all complete with manuals. Howard ☎ 01536 418137

■ ***SoftWindows*** for PowerMac – £100 ono inc P&P or swap for inkjet printer. Steven ☎ 0115 942 1987

■ ***Guinness Book*** *of Records 1994* – £15; *MS Dinosaurs* – £10; *San Diego Zoo Animals* – £10; *Leonardo* – £10; *Benjamin Bunny* – £10. ☎ 0161 969 8864

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■ **Engineering,** science & maths Mac contacts wanted. I'm doing an Electronic BEng. Want to swap related shareware? Larry ☎ 01732 852034

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■ **Two 2Mb,** 80ns, 30-pin SIMMs wanted. ☎ 01384 481728 (any time)

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■ ***RAM Doubler 1.5.1,*** vgc, manuals. Satty ☎ 01203 615029 (after 6pm)

■ **MACFORMAT** issue 21, Feb '95, CD pref, your price plus P&P. P Goddard, 23a Wales St, Dunedin, New Zealand

■ ***MS Word 3*** or later for 1986 Mac Plus to replace lost 3.5-inch disc. ☎ 01206 549962

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■ **PowerBook** 140 4/40, good cond (needs new battery, costs £50) for PostScript LaserWriter or colour scanner. London or Purley ☎ 0589 982642 or e-mail **s.hunt@nature.com**

■ Swap **Newton** MessagePad 100 for CD drive, pref quad- or triple-speed. London/Purley ☎ 0589 982642 or e-mail **s.hunt@nature.com**

■ Swap **French** Mac mags with CDs for old UK Mac mags, '93 backwards. Larry ☎ 01732 852034

■ Swap ***Prince of Persia*** & *Nascar Challenge* for *SimCity 2000.* Tom ☎ 01727 851914 (eve)

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■ ***Canvas 3.0 – The Book,*** from Peachpit Press, brand new, everything you need to know about *Canvas* – £10. ☎ 01484 510753

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■ **MACFORMAT** issues, '93, '94, '95, some disks & CDs, you collect – £15. Nr Stockport ☎ 0171 427 6998 **MF**

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These user groups are registered with The User Group Council. For details contact John McKnight ☎ 0181 314 5555.

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■ Cancer Research/RMH UG, Raymond Henry ☎ 0181 643 8901 ext 4636
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■ Glasgow Mac UG, Stephen Broadfoot ☎ 0141 339 6646
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- Citizen's Advice Bureau;
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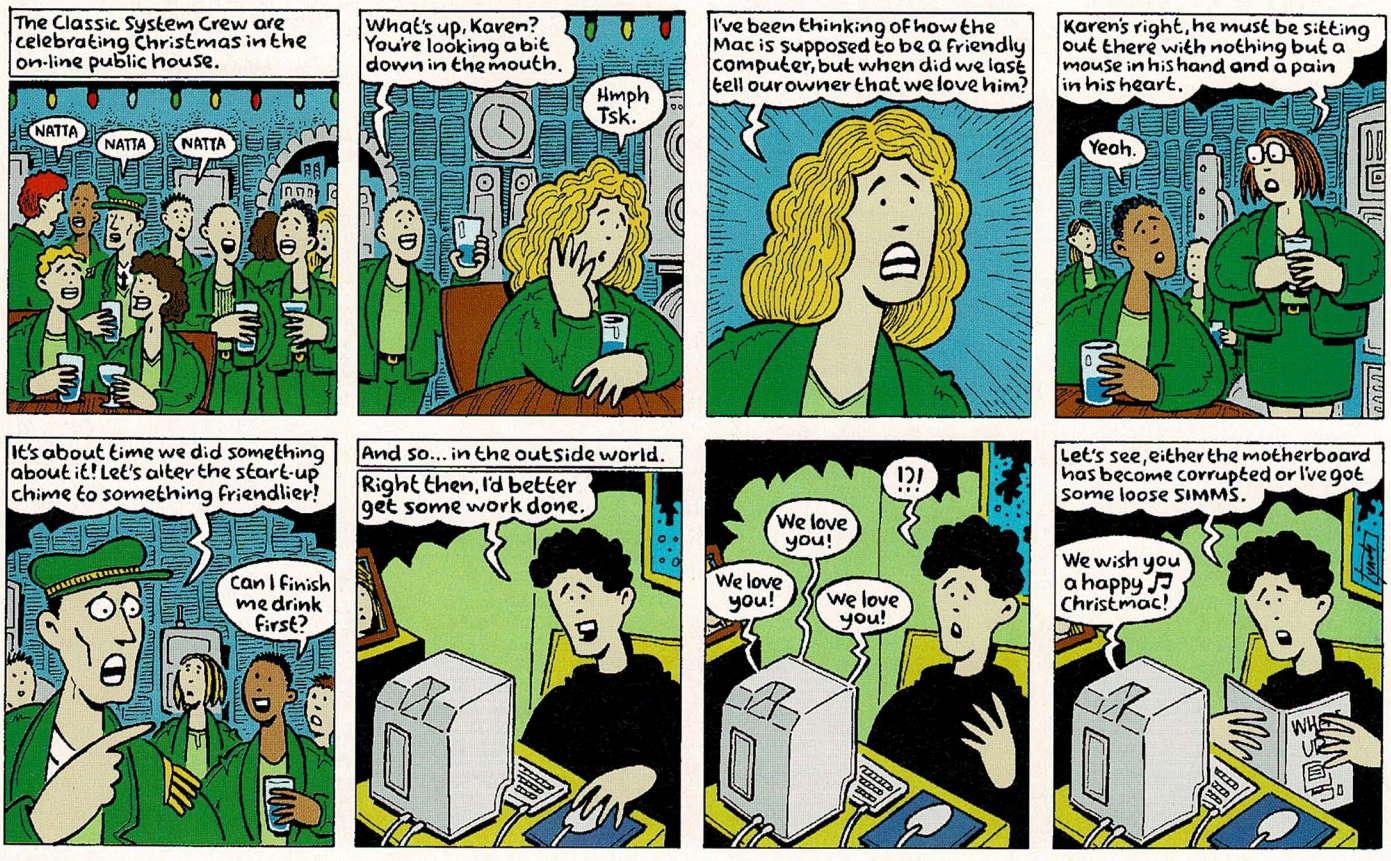
The Classic System Crew

By Bob Lynch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NATTA
NATTA
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Hmph Tsk.
I've been thinking of how the Mac is supposed to be a friendly computer, but when did we last tell our owner that we love him?
Karen's right, he must be sitting out there with nothing but a mouse in his hand and a pain in his heart.
Yeah.
It's about time we did something about it! Let's alter the start-up chime to something friendlier!
Can I finish me drink first?
And so... in the outside world.
Right then, I'd better get some work done.
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We love you!
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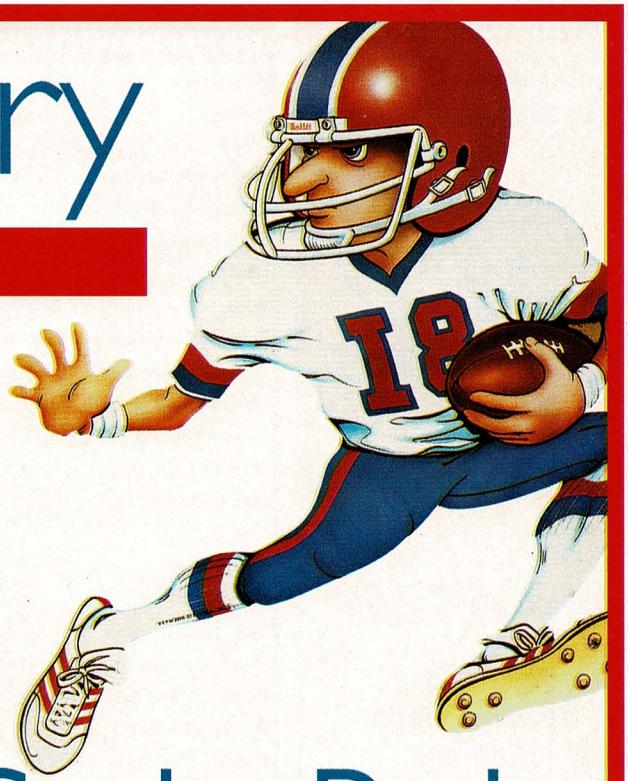

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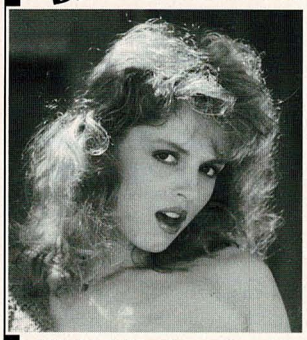

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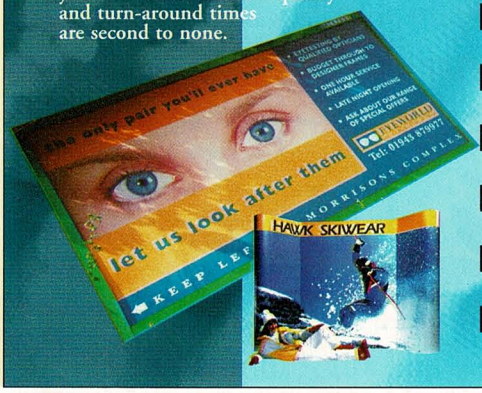

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The bigger picture – from the Tiny Zone

Hello and welcome again to Tiny Zone, the small section of MACFORMAT that broadens your perspective. If you've been reading the papers in the last month or so, you might've noticed all the stories about Apple being about to be taken over. You might even have heard MACFORMAT's Editor being grilled about the subject on Radio 5's *Big Byte* program on the Sunday after Apple Expo. (Tiny Zone, unfortunately, didn't. Sadly, it clashes with *Mission Impossible* on Channel 4...) He swears he *thought* he was going to be asked about all the lovely new stuff on show at Apple Expo... It was only later that he saw the story in that very day's *Independent on Sunday* headed 'The rot sets in', and he suddenly realised why the program's presenter was so fixated on the state of Apple. For what it's worth, Tiny Zone thinks it's all a storm in a teacup: does it matter who owns the company, really? Sure, it matters if you're an Apple shareholder, or possibly if you're an Apple employee; but from the consumer's point of view what matters is whether you'll be able to buy a Mac or not, or, if you've already got one, whether it will continue to be supported. On that score there's good news, regardless of who owns Apple: the two latest surveys of computer sales in the US put Apple in top spot, with between 13% and 14% of the market, in the third quarter of 1995 – the quarter when Windows 95 went on sale! That is, Apple actually *increased* its market share in the face of MicroSoft's publicity blitz. Far from being ready to fall, Apple seems to have plenty of bite left in it yet...

NEXT ISSUE

Complete 3D package!

Add an exciting new dimension to *your* Mac with the *complete* 3D modelling & rendering package on our Cover CD-ROM! Plus, discover QuickDraw 3D, the most powerful 3D system ever, and the amazing new generation of 3D Mac software!

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Unbelievable? Impossible? Don't miss next issue!

Store Wars!

What can you get if you're running short of disk space? We test storage options from extra hard drives to removables. Multiply those megabytes!

PLUS 1996's first CD encyclopaedia ■ Storytelling in the CD age ■ How to handle strange text formats ■ 'Desktop printing' on *your* Mac ■ *Marathon 2* reviewed ■ *Doom 2* gamebusters guide ■ And much, much more!

ARE YOU A WINNER?

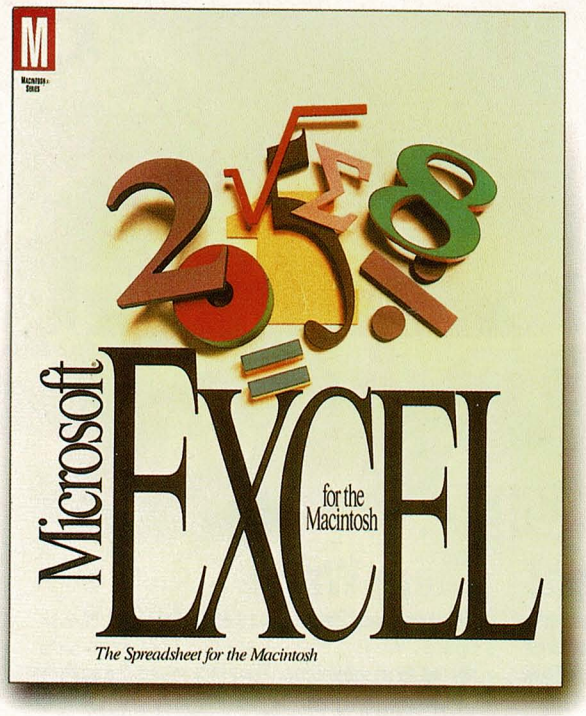
Back in MACFORMAT 29, we gave you the chance to win one of ten gorgeous exclusive lithographs of the Librarian from Terry Pratchett's *Discworld* series, signed by the artist, Paul Kidby. The ten winners are: Silvia Janssen from Herten, the Netherlands; Rebecca Hamblin from Bristol; Hina Joshi from Harrow; S Neaves of Royston, Herts; Steve Stock from Port St Mary, Isle of Man; Terry Cymbalisty of Morley, West Yorks; David Gillespie of Sutton in Surrey; Chris Carrick of Bishop Auckland, Co Durham; Mrs E Bryan of Dunmow, Essex; and Martin Mayo from Arigna, Co Roscommon, Ireland. Congratulations to all! (And don't miss the Terry Pratchett interview in issue 7 of our sister magazine *SFX* – still on sale, if you're lucky!)

MACFORMAT 34 goes on sale on Thursday 18 January

Available with high density floppy disk or CD-ROM. Ask your newsagent to save you a copy or see the card insert in this issue for our special subscription offers

Win ten copies of Microsoft Excel 5

To celebrate ten years of *Excel* on the Mac, we're giving away ten copies of *Excel 5*, the top Mac spreadsheet, worth more than £2,500, courtesy of Microsoft.



Determined to get your life organised? Run your business? Organise your finances? You need a spreadsheet, and *Microsoft Excel 5* is the most powerful, comprehensive, yet easy-to-use spreadsheet you can find. In fact, it's now the only stand-alone spreadsheet available for the Apple Mac.

Excel already has more than half a million users nationwide, and version 5 incorporates powerful new features such as the TipWizard, which watches you as you work and offers advice on how to become more productive; AutoFilter, which creates a drop-down index to your data, making it much faster and easier to find the information you need; and Drag and Plot, which enables you to update charts by simply dragging-and-dropping new data onto an existing chart.

As well as these ways of making everyday tasks easier, *Excel 5* also has features that enable power users to build their own solutions, using *Visual Basic for Applications*, easily-accessed on-sheet controls and OLE (Object Linking and Embedding) automation.

Excel 5 is future-proof too. It supports new technology such as QuickDraw GX printing and AppleScript – it's scriptable, recordable and attachable (and if you're wondering what that means, turn to the AppleScript feature on page 79). If you're using it in a shared environment, *Excel 5* offers the ability to easily share files with other users, no matter what platform they're using. And, as you'd expect, it fits seamlessly into the other *Microsoft Office* applications – including *Word 6*, *PowerPoint 4*, and *Microsoft Mail 3.2*.

Microsoft Excel 5 normally sells for £258.50, or you can purchase it as part of *Microsoft Office 4.2*, which retails for £470. Microsoft are the largest suppliers of software for the Mac, including such famous names as *Word*, the world's best-selling word processor, and the highly-regarded CD-ROM encyclopaedia *Encarta*.

To win a copy of *Excel 5*, just answer the three simple questions below and send us your entry on a postcard or the back of a sealed envelope. The closing date is Friday 26 January 1996.

The Rules

Employees of Microsoft, Future Publishing Ltd or associated companies, and their families, are not eligible to enter. Multiple entries are not allowed, unless on the back of Bill Gates' secret business plan for the next five years. The editor's decision is final, no correspondence will be entered into, and there is no cash alternative. Please state if you don't want your name added to a mailing list. **MF**

The Questions

1. OLE technology enables you to embed information from any Microsoft application into another. OLE stands for:
(a) On-line Editing
(b) Object Linking and Embedding
(c) Official Lager Expenses

2. Which of the following can you *not* do using a spreadsheet?
(a) Automatically recalculate totals
(b) Manage your home accounts
(c) Make the tea

3. What are *Excel's* built-in help features called?
(a) Wizards
(b) Sorcerers
(c) Warlocks

Send your answers on a postcard or sealed envelope to: 'I want to Excel' Compo, MACFORMAT, 30 Monmouth Street, Bath BA1 2BW.

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page from our full colour mac catalogue of the best games, education, entertainment and utility products.

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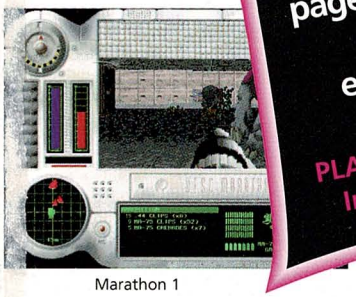
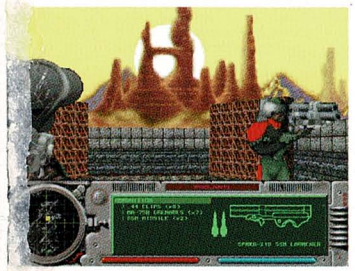


Marathon 1

Doom II

Descent

FlashBack



Marathon 2 - Durandel

...in his head, In two hours, the Burn:Cycle virus will turn Sol Cutter's brain into jelly.

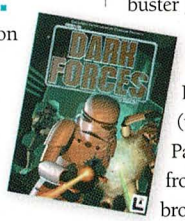
CD Burn:Cycle **£38.29**

Blackthorne.

Brooding and dark, the action experience with an attitude. Battle your way to the ultimate showdown between good and evil as Kyle Blackthorne battling to save your home world.
A graphically stunning platform game.

Blackthorne **£29.78**

Dark Forces.



Experience 1st person firepower in a 3D Star Wars universe. Your mission? Join the Rebel Alliance's covert operations division, infiltrate the Empire, then battle every man, creature and machine the Imperial Forces can muster. 10 lethal weapons, 20 enemies and 14 complex environments to survive through before you can defeat the Empires Doomsday army.

CD Dark Forces **£42.54**

Descent. Deep in the

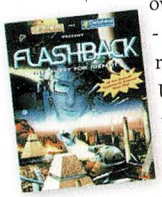
mines of Pluto, an evil race has taken over the Post Terran Mineral Corporation and is heading straight to Earth. To stop them you'll find yourself plunging down endless mineshafts and through never ending tunnels. Robotic menaces will confront you at every turn. A adrenalin pumping full 360° environment waits you—simply imagine Doom with no limits!

Descent **£34.03**

..... **£38.29**

FlashBack, the sequel

to Another World. A futuristic action adventure that sets you in an alien world where you have to battle to find yourself and your way back home. Cinematic sequences, backgrounds, stunning animation and spine tingling music combine to make FlashBack totally addictive.



FlashBack **£25.52**

Games of Fame.

A collection of three blockbuster games: Crystal Caliburn, the pinball simulator; F/A-18 Hornet flight simulator (version 1) and Pathways into Darkness, from the people who brought you Marathon.

CD Games of Fame **£34.03**

Glider Pro. Fly your

paper Glider in and out of an eccentric, architecturally-disastrous, old house. Avoid the bizarre obstacles such as flaming candles and the dredded paper shredder: Then... fly right out the window! Over meadows and rooftops, even underground!

Glider Pro **£29.78**

Mac Best Sellers

Three best-selling games in one package! Super Tetris: the direct successor of the award-winning Tetris. Hellcats over the Pacific: get in the pilot's seat of the Pacific Theatre's most notorious aircraft, the F6F Hellcat. Spectre: take out your opponents as you manoever your craft round a virtual reality arena.

Mac Best Sellers **£38.29**

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Marathon.

You are the last hope for defending your starship as hostile and intelligent aliens prepare to destroy every living thing... Marathon equips you with amazing futuristic weapons and technologies, introduces vicious aliens and traverses hundreds of miles of terrain over multiple elevations - all depicted in high resolution 3D graphics. Up to 8 players can play in teams, or against each other, over a network.

Marathon **£49.99**

CD Marathon **£49.99**

Marathon 2, fresh

from your triumph on the starship Marathon, you are seized by the rogue computer Durandal to do his bidding in a distant part of the galaxy. Within the ruins of an ancient civilisation, you must seek the remnants of a lost clan and uncover their long-buried secrets. Battle opponents ancient and terrible, with sophisticated weapons and devious strategies.

Up to 8 people can play the whole game cooperatively, in teams, or every-man-for-himself. Games everyone played as a kid—Tag, King of the Hill, Kill the Guy with the Ball and more, all whilst very heavily armed!

CD Marathon 2 ..... **£TBA**

PegLeg. Equipped with

a Mach Z Battalion Blaster, you alone must save the earth from alien invasion. One of the most satisfying arcade games around, PegLeg is elegant, simple and so addictive it's dangerous.

PegLeg **£25.52**

Primal Rage the

ultimate beat 'em up for the Macintosh. Beat the living daylights out of a variety of smelly dinosaurs, including the infamous Blizzard! A near perfect copy of the critically acclaimed and hugely successful arcade game!

Primal Rage **£34.03**

Prince of Persia Collection contains

both the award winning Prince of Persia platform game with the stunning sequel: 'The Shadow and the Flame'. Amazing animation as you take the role of the swashbuckling Prince.

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Power Pete Destroy

the innocent fuzzy bunnies! You're Power Pete - the most powerful action figure money can buy. Armed with an arsenal of toy shop weapons, from toothpaste guns to exploding birthday cakes, you mow down the evil toys while delivering the bunnies to safety.

CD Power Pete **£29.78**

ShadowWraith.

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CD ShadowWraith **£34.03**

Space Madness

blends sound, graphics and animation into a thoroughly engrossing experience. Non-stop blasting action.

Space Madness **£25.52**

Wolfenstein: You've

got a gun and 90 levels of }

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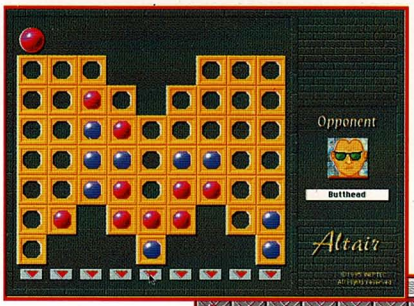
MACFORMAT

ON THE DISK THIS ISSUE...

Neatly packed onto the Cover Disk this issue are ten folders to tempt you. If you're a games fan we bring you *Altair*, a *Connect-4*-alike, *GravityBalls*, which will have you frantically pushing your robotic rodent around the desk, and *Mac Video Poker*. *Eclipse* is possibly the best shareware screen saver around, offering features you'd expect to find only in expensive commercial products, while *Text Browser* is a handy application that can quickly open text files, no matter how large. Essential utilities include *StuffIt Expander* (the multi-purpose file expansion program) and *Program Switcher*, which enables you to switch between programs at the press of a button.

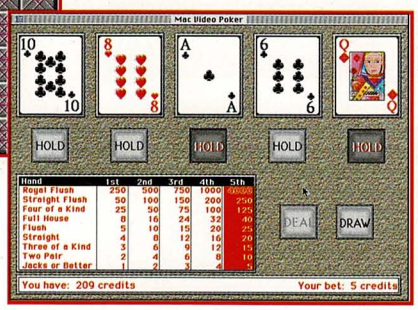


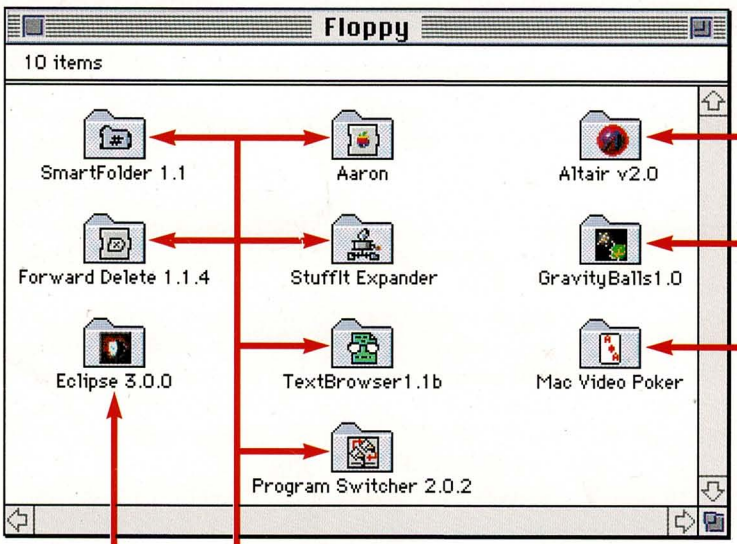
GAMES

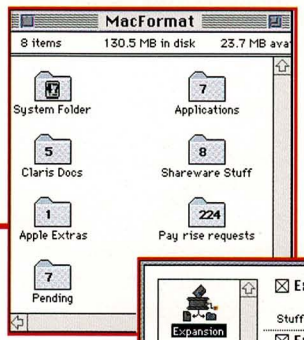
If you've ever played *Connect 4*, *Altair* will look familiar. The challenge couldn't be simpler: just line up four counters before your opponent does, and you've won. Of course, you will be competing with a thinking power capable of millions of calculations every few seconds...

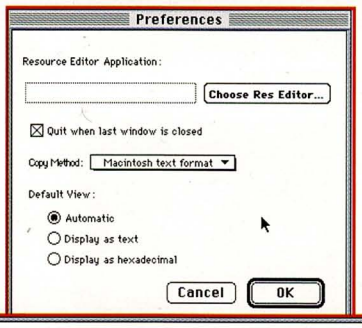
GravityBalls is the ultimate in frustration. Your aim is to keep a small ball within a predefined area, using your mouse. You only need to keep the ball in the square for eight seconds, but it's trickier than it sounds... the square gets progressively smaller and the ball faster.

Mac Video Poker offers hours of gambling fun, with slick graphics and the chance to win piles of virtual money. Who could resist?

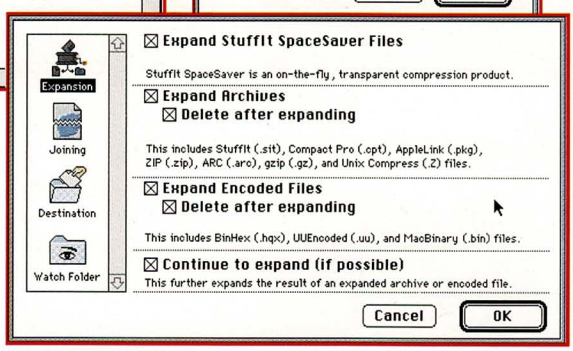








Eclipse Info...
On Thursday, October 12, 1995 at 1:01 PM
Someone entered an incorrect password while attempting to undim Eclipse.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This includes StuffIt (.sit), Compact Pro (.cpt), AppleLink (.pkg), ZIP (.zip), ARC (.arc), gzip (.gz), and Unix Compress (.Z) files.
Expand Encoded Files
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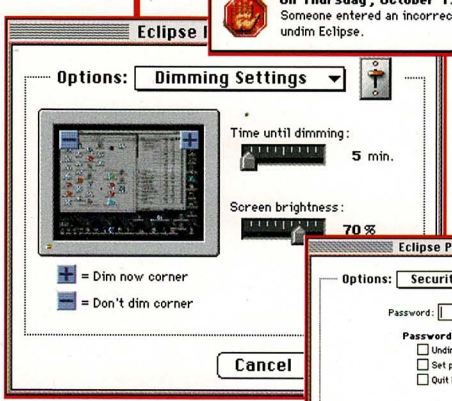
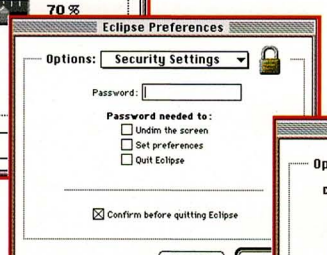
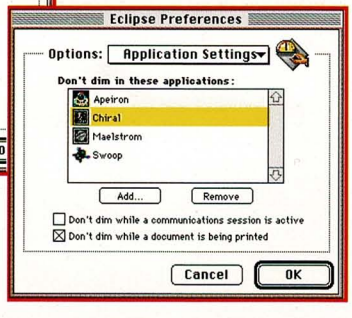
Cancel
OK







ECLIPSE 3.0.0

Screen savers are often just a collection of animations that don't really do the job they're designed for. *Eclipse*, however, offers you a whole range of options, from simply dimming the screen to displaying slide shows and QuickTime movies. Even more usefully, there are also security features to stop anyone tampering with your Mac when you're away from your desk.

UTILITIES

Transform your Finder using *Aaron*, a Control Panel that gives your icons what is rumoured to be the 3D look of Copland – the next generation of System software. Prefer to keep things the way they are? The *SmartFolder* Extension displays the number of items in a folder outside it – so you don't have to open it to find out how many files are tucked away inside. *StuffIt Expander* converts files downloaded from the Internet into a useful format and expands files, in one simple operation. With the tiny *Program Switcher* installed, you can set a key combination to switch between the applications you have open. *Forward Delete* gives your keyboard the ability to forward delete, and *TextBrowser* can open almost any text file in mere seconds.